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LESS CHILDBIRTH.

A BOOK FOR WOMEN;

—CONTAINING—

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PRACTICAL RULES HOW THE PAINS AND PERILS, THE
DIFFICULTIES AND DANGERS OF CHILDBIRTH
MAY BE EFFECTUALLY AVOIDED

— BY —

JOHN H. DYE, M. D., Buffalo, N. Y.

SILVER CREEK, N. Y.
THE LOCAL PRINTING HOUSE,
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INDEX.

CHAPTER I—SEXUAL ATTRIBUTES.

	PAGE.
Co-existent with human existence—the same throughout all ages,	5
Love fulfills both Divine and human laws.....	6-7-8
The difference between sexuality and sensuality.....	6-7
It is man's duty to comprehend the laws of his being, for in knowledge there is safety.....	6
Ignorance will not protect him from the penalty of broken laws— reason should govern his acts.....	6-7
Should govern his passions instead of letting them govern him, Neither sex is complete in itself. The attraction of the sexes the basis of marriage.....	7
Which loves most, man or woman.....	7-8
Sexual passion—not essential to reproduction—mental, moral, and physical influences of the mother upon the unborn, 9-10-11-12-13	12-13
Transmission of vital and other characteristics.....	10-11
The highest and holiest duties of earth consigned to woman.....	11
Discretion.....	12
Definite and well regulated laws, universal.....	13
Pain the result of having broken some law—unconscious transgression.....	12-13
Like begets like.....	14

CHAPTER II—MATERNITY.

Woman's legitimate object. The highest and holiest to which she can aspire.....	15
What maternity implies—its beginning and end.....	16
Early development of characteristic traits—maternity encouraged by the ancients—all women are not fit to become mothers.....	17
How the transmission of disease may be favored or opposed— matrimonial selections.....	18-19-20-22
Woman instead of legislatures should control her functions— how our civil laws operate.....	19-20
Abuses of reproduction—opinions of authors—the confliction of social and natural laws.....	20-21
Laws against preventing conception.....	22-23
As many sterile women want children as fertile ones want to prevent them.....	22
A mistake of the newly married.....	23
The proper age for marriage and its influence on mother and child.....	24-25-26
Symptoms of conception.....	26
Mothers' marks—how produced, how prevented.....	27-28-29
Longings—meddlesome busybodies—the plan of the ancient Greeks.....	29
Who should nourish the child.....	29-30

CHAPTER III—IS PAIN NECESSARY?

The answer to this important question—has the Almighty a special design in afflicting woman.....	31-32
If the descendants of Adam escape pain, why not the descendants of Eve. Special Providences.....	32-33

Efficacy of prayer.....	33
The performance of healthy functions painless.....	34-35-36
Childbirth is natural, and should be painless—pain a sign of disease.....	36-37
All women do not suffer—uncivilized usually escape—why—instances.....	38-39
Obstetrical literature nearly silent—pain is unnatural and unnecessary	40-41

CHAPTER IV—CAUSES OF PAIN.

Unhygienic customs—physical conditions.....	42-43
Social influences—slavery of different stations in life contrasted	43
Irritable nerves—curvature of spine—malformations—tight lacing—shape of pelvis.....	44-45
Female diseases—improper treatment—errors—marital relations	46-47
How the condition of the child affects the mother—its size—hardness of its bones.....	48-49-50
All these causes can be rendered in operation.....	50

CHAPTER V—HYGIENIC MANAGEMENT.

The objects of hygiene.....	52
How surroundings affect pregnant women.....	53
How she must conduct herself—what exercise is best, and how and when to take it	53-54
Turning the room out doors to air it.....	55
The difference between bathing and soaking—what kinds of baths are best—their properties, etc.....	56-57
The sitz bath.....	57-58
Sleep—dress—the Spartan law.....	59
How sexual influences affect both mother and child	60
All pain, difficulty and danger unnatural.....	60

CHAPTER VI—DIETETIC MEASURES.

Composition of the different kinds of food.....	61
How the mother's food affects childbirth.....	62-63-64
The first experiment and how it resulted	63-64-65
A very liberal dietary.....	66
Food that contains phosphate of lime is to be carefully avoided—acids	66-67-68
The English lady's experiment.....	68
Must the mother eat for two.....	69
The extra amount of nourishment required.....	70

CHAPTER VII—REMEDIAL TREATMENT.

Diseases must be cured.....	72
An Indian tradition—what the squaws do.....	72
Squaw vine—what is it for	72-73
A favorite preparation and what it cures	74
The properties of blue cohosh—its power to prevent pain and miscarriage	75
Proof that remedies prevent painful labor.....	73-74-75-76-77
Mothers cordial—experience of physicians.....	75-76
The value of black cohosh	77
Skepticism and unbelief	77
How these medicines are to be used	77-78
Other functions deserve attention	78
Hygiene—dietetic and remedial management of constipation—prescriptions	79-80
The kidneys must be kept healthy—prescriptions	80-81

PAINLESS CHILDBIRTH.

What causes morning sickness—husbands sometimes subject to it—the fallacy of its necessity—remedies—management—prescriptions	82—86
Depraved appetite—shall longings be gratified or not.	86
Flatulence and colic—causes and remedies	87
Varicose or knotted veins—causes and management	88
Heartburn—temporary and permanent remedies	88—89
Piles—justifiable interference—remedies	89—90
Constipation—danger of neglect—prescriptions, etc.	91—92
Shall diarrhoea be checked—reliable prescriptions	92—93
Cough—importance and remedies	94
Headache—danger—attention demanded—what to do	94
Itching—the agony it causes—hygienic and remedial treatment—prescriptions	95
Wakefulness—the sleeping room—hygiene—medicine	95—97
Fainting—palpitation—causes—prevention—remedies	97
Swelled feet—pressure of womb on veins a cause—other causes—the treatment	98
Cramps	99
Abortion—erroneous ideas—the expense of it—how maternal responsibilities are evaded	99
Legal consideration—is the crime justifiable—prevention of conception or abortion considered	100—101
It is murder—its effect upon the woman	101—102
Unintentional causes—premonitory and actual symptoms	102—103—104
Hemorrhage the greatest immediate danger—inflammation subsequently	104
My first case	104
Preventive measures and when necessary	105
Management, prescriptions, etc.	104—105—106
Nervousness and remedies for it that are better than opium or chloral	106—107
Sore nipples—how to prevent trouble—how to cure them	107—108
Leucorrhœa—a symptom—extensive prevalence—remedies and important advice	109—110
False pains distinguished from true ones	110
Intense suffering from irritable bladder—readily overcome—the remedies, etc.	110—111

CHAPTER VIII—ANESTHETICS.

A priceless boon and perfectly safe	112—113
Accidents among dentists	113
Theoretical objections not sustained in practice	114
The degree of insensibility desired	115
Should other plans fail this will make labor painless	115
Who shall take them and who shall not	116
How long continued—views of physicians	117—118
Why this chapter is introduced	119

CHAPTER IX—MANAGEMENT OF LABOR.

The period when it should occur	121
The code Napoleon—instances of protracted labor	122
Preparations for labor	123—124—125
Premonitory symptoms	126
Indications of labor—true and false pains	127—128
Management after it has begun—remedies for rigidous	129—130—131
Encouragement—progress, etc.	131—132—133
Ineffectual labor—how overcome	134—135
Flooding—the cord—the after birth	136—137
Care of mother and child—learning the child to nurse	138—139
After birth—superstitions—disposal	140

INDEX.

CHAPTER X—MANAGEMENT AFTER BIRTH.

Look after the mother's rest.....	141-142-143
Involution of the uterus.....	143
Diet of the mother.....	144
The lochial discharge—danger of neglect.....	144-145
When it is unnatural what is to be done.....	146
After pains—remedies.....	147-148
Attention to the bladder.....	149-150
The bowels—bloating.....	151
Milk fever—the nipples and breasts.....	152-153
Nursing sore mouth—the remedies.....	154
Dosing and stuffing the young eminent as soon as it is born,.....	155
Nursing—why it should be done.....	156
Milk for the child—a very important matter.....	158-159
Regulating the sleep of the child.....	160
Proper food for children—weaning.....	161-162
Dress and bathing.....	164
Moral considerations.....	165-169
Medicine for the baby.....	169
Bowels—jaundice—urine.....	170
Sore eyes—prescriptions.....	171
Vomiting—diarrhoea—remedies.....	172
Colic—remedies.....	173
Teething—its troubles and remedies.....	174

CHAPTER XI—STERILITY.

A Divine mandate—the consummation of love but half attained.....	176
Professional confidences—quacks and marriage guides.....	177
Interesting considerations—history.....	178
Causes of sterility.....	179-180-181
Hymen—what its presence or absence indicates—the woman blamed.....	182
Displacements of the uterus.....	183-184
Uterine tumors—how they act as causes, and who are to manage them.....	185
Deformities of the uterus—stricture.....	186-187
Chronic inflammation.....	189
Leucorrhœa.....	191
Dysmenorrhœa.....	192
Menstrual derangements.....	193
Ovarian and uterine debility.....	193
Sexual excesses and apathy.....	194
Ovarian diseases—late marriages.....	195
Sometimes the husband is to blame if marriage is unfruitful,.....	196
Temperamental incompatibility.....	197
Other causes—some not to be considered—relations of society,.....	199
When a woman is sterile who is to blame.....	200

PUBLISHERS' NOTICE.

Some two years since the author prepared the manuscript of this little work for publication as a serial in the *Popular Medical Monthly*, a journal of which he was then the editor and proprietor. Circumstances resulting in the sale of the paper and its subsequent suspension prevented him from carrying out his design. We were at the time doing the typographical work of the *Monthly*, and the manuscript was placed in our hands. Being interested in the subject we were led to read the manuscript and finding so much in it that was meritorious, and knowing the reliability of the author as a professional gentleman, we requested the privilege of publishing the serial in book form, and though it had not been prepared with the same care as if it had been intended for publication in book form, he consented in the hope that

it might be a means of relieving the suffering of womankind. The MSS was hastily prepared amid the cares of a busy practice, and though it may present many literary defects, we trust the motives that led to its production, will secure the reader's forbearance. After obtaining the author's permission to publish PAINLESS CHILDBIRTH, circumstances caused us to defer it until the present. In presenting it to the public we trust it will be received for what it is worth, and believe that much suffering will be avoided by attention to the instructions it offers.

SPEARS & BROWN.

CHAPTER I.

SEXUAL ATTRIBUTES.

Co-existent with life itself, from the earliest period of human existence to the present ; obedient to the Divine command ; designed to subserve one of the grandest purposes of nature; essential to the preservation and continuance of our race, are the sexual attributes of man.

Our first parents were created with the same physiological differences that characterize and distinguish the sexes today, and though they were created in a state of maturity there was engrafted upon their constitutions those self-same inherent properties that actuate mankind in the present, having been transmitted from parent to offspring through the process of generation.

What love is to the soul, the sexual attributes are to the physical part of man. Love is the rudimental element of the soul, the essence of the Almighty; sexual attributes, the medium through which the spirit essence is transmitted to, and engrafted upon, the physical being. Both are Divine gifts—in perfect harmony with man's happiness, and conducive to his enjoyment. "Love constitutes the foundation of human nature," it is the motive power, as it were, of our impulses, actuating, regulating, refining human character. "Sexuality implies reproduction," and associated with love, is an instinct, the office of which is to repair the ravages of death by a continual transmission of life. The sexual passion is one of the most powerful impulses, and when subordinate to reason and love, its purpose "is rather to subserve the object of continuing the species than merely its own gratification." "Sensuality is an unbridled desire which kills the soul." "It degrades love and brutalizes man."

Man is a rational being, endowed with reasoning powers, capable of comprehending his attributes, and understanding the laws of their application. It is his *duty* to understand and observe whatever contributes to his happiness, and avoid whatever may cause suffering and misery. Ignorance will not protect us from the penalties of broken laws.

It is by no means the author's wish to offend the fastidious, or pander to depraved tastes, yet the conviction is constantly forced upon him that if the public were better instructed upon sexual questions, far less suffering and crime would exist. "The proper study of mankind is man" and, it is very appropriately said, "knowledge is safety." Reason instead of instinct

should govern our acts. The attributes capable of contributing to our enjoyment as well as preserving our lives, are too often perverted and abused, and thus become sources of pain and death. It is therefore proper that we understand these facts and live accordingly; that *we govern* our passions instead of permitting them to govern *us*. This we cannot do if we do not understand the relations between cause and effect.

If we are ignorant of the necessity of restraining our animal propensities, and of keeping them within proper bounds; if we do not know their boundaries; or if we are ignorant that we incur certain penalties if we over-step these boundaries, we will be constantly liable to violate both Divine and natural laws, and be punished for the same, though at the same time not realize what we are being punished for. The majority of people blame Providence for their afflictions, while the truth is they have, though perhaps unwittingly, broken some law of their existence. It is not the author's intent to enter into a consideration of these laws and their effects in this work any farther than relates to the causes of pain in maternity, and how to avoid them, yet he hopes these hints will lead the reader to investigate the matter of *laws of life* and the penalties imposed for violating them.

Neither sex is complete in itself, but the diversity attracts the one to the other, to complete the one by union with the other. Neither alone is capable of transmitting life, and their union is necessary not only for the welfare of each other, but also for the purpose of carrying out the Divine command, "multiply and replenish the earth." This attraction of the sexes "is the basis of marriage, and of the laws and customs

which recognize the life-choice of one woman for one man."

"When love is pure and true, it does not find its complete satisfaction except in the indissoluble bond of marriage. Marriage is its natural consummation.

"Before sexual union, it is the man that loves the most earnestly, because he sacrifices more—pains, marches, contests; he spares nothing.

"When the act is consummated, it is, in her turn, the woman who loves more, and for a longer time. Then her love becomes labor and suffering; she must nourish with her blood the being to which man has communicated life; she must bring it into the world in the midst of cruel pains; she must continue for it incessant cares."—*Bourgeois*.

Most observers concede that the sexual passion is stronger in men than in women ; indeed some women have none at all, and though the absence of this passion is in most cases the result of disease or the early abuse of this function, there are cases met with in which sexual apathy is the only abnormal condition present. In such cases philoprogenitiveness may be perfectly developed, and I have met many cases of the kind where women have become mothers without experiencing any sexual emotion whatever.

There is another class in which a proper and natural degree of passion exists; while in still another though smaller class, it exists in an unnatural degree, often amounting to *nymphomania*, a disease manifested by excessive erotic desires, which are controlled with great difficulty, if at all. Those of the first class incapable of experiencing the emotions that influence and control the latter, regard them with contempt

and hatred when pity would be far more proper. Fortunately such abnormal conditions are amenable to proper therapeutic measures.

There should be neither passion, pleasure nor pain, which is not shared by both sexes. Generation is a duty; "Children are a good and not an evil," and the feelings that impel to reproduction, are as much a part of nature as is the hunger or thirst that prompts us to eat or drink. But it is a physiological fact that the moderate use of any function contributes to health, longevity and enjoyment, while excessive indulgence is punished with physical ills.*

Although it is possible for conception to occur where no sexual passion is manifested, nevertheless it is true "that the disposition of the woman at that time has much power in the formation of the foetus both in modifying its physical constitution and in determining the character and temperament of its mind."

Her influence over the unborn does not by any means end with conception, for nine months she continues to impress upon it mental and physical characteristics that to a very great extent shape its future course and determine its usefulness in society. The moral influence of the mother must not be forgotten, for it is while the rudimental brain and nervous system is being developed, that impressions are easiest made and most apt to remain. Small influences at this time may grow into great variations of character in future.

True, the impress of the father will be seen in the

*In this consideration the author is desirous of being understood to mean reproduction under such moral and social laws as govern the people where it takes place, it not being his intention to discuss monogamy, bigamy, polygamy or promiscuity in this work.

child, but it is during gestation that the fetus is a part of the mother herself, "blood of her blood, bone of her bone," and we may add, nerve of her nerve.

Circumstances that influence the life of the mother during this interesting period, necessarily exert a similar influence upon the child, in a greater or less degree. The stronger constitution of the mother may not be permanently impressed by external influences, while the child may be so affected that a life-time will not be long enough to efface them. Thus hereditary characteristics are transmitted and developed; thus ante-natal influences shape the destiny of the unborn.

Excessive gratification of the sexual passions exhausts the vital and nervous forces, deranges the vegetative functions and lays the foundation of various diseases; and the diseases and physical conditions of the parents at the time of conception and during gestation will materially modify the constitutions of their offspring.

"While the reproductive organs are not the seat of life, it is a well established fact in physiology and pathology that they exert a most profound influence upon the performance of every function of the animal economy. Concerned as they are in the transmission of life, it is through them that vital and other characteristics are handed down to posterity, so that the welfare of future generations depends materially upon their inheritance. "Children born of parents suffering from diseases of these organs are generally defective in vital and other qualities, illtempered, sickly, and short-lived."—*Baker*.

Children born of parents of fair intellectual qualities, but who have indulged their animal propensities

to such an extent that they are suffering vital defects will usually be bright, keen of perception, have large heads, but will be physically weak, fall easy victims to diseases of various kinds, and in very many instances, die under ten years of age. Sometimes the arts of the physician will avert those fatal tendencies of such constitutions, but were he able to do this far oftener than he is, how much better would it be to know the laws that regulate such conditions, and by living in obedience to them, avert the penalties of breaking them. Even though cures for diseases were always possible, how much better it would be to prevent them.

Carry the question of vital transmission farther. Exhaust the vital qualities of the parents still more, set up the diseases that follow the breaking down of the system by excessive sexual indulgences, and the children will rarely have the redeeming qualities of the former class but will be scrofulous, idiotic, deformed and epileptic. SCROFULA! What a multitude of sins that word covers! Could those who use it know all that it implies, few would expose their sexual errors to the world by its utterance.

"Certainly the highest and holiest duties of earth are consigned to woman; she is the one who moulds the physical form of her offspring and rears it to the stature of man, and shapes its moral and intellectual destiny. The embryotic being draws nutriment and subsistence from its maternal parent, and derives its vital impress from the parent stock. Loveliness begets loveliness; purity begets purity; wisdom begets wisdom; selfishness begets selfishness; hatred, hatred; bad temper, bad temper; licentiousness, licentiousness; crime, crime; etc., etc.

"Excessive venereal indulgence; excessive child-bearing; excessive nursing are terribly destructive to the vital forces of woman's organization. * * * This slavish drudgery to maternal requirements is the cause of many distressing disorders, producing irritability of temper, and all those domestic *contretemps* which so often destroy the happiness of the family relation, and bring odium and disgrace upon the marital institution, designed by the ordinances of nature and heaven for the highest felicity of man and woman in a state of terrestrial existence."—*Pancoast*.

The influence of moderation in these matters can not be over-estimated. The evil influence of excesses are to be seen in both parent and child. As the excessive indulgences exhaust the vital forces, irritability is increased, the sensorium becomes more and more acute, and trivial ills become severe pains or serious diseases, and the natural sensibility becomes so greatly exaggerated, that the mother is subjected to continual agony both before and after birth.

"The act of generation is a voluntary one, but nature has so placed it under the empire of pleasure that the voice of discretion is no longer heard, and the will is led captive. Hence it is well for hygienic reasons to consider its laws.

"Too frequent repetition of the reproductive act is known to be followed by consequences injurious to the general health. Too rigid continence is not unattended, in many constitutions, with danger, for the victory over passion may be dearly bought. Science recommends the adoption of a wise mean between the two extremes, equally destructive. By following her counsel, woman may escape from the hysterical and other disorders which often wait as well upon excesses as

upon the too great denial of that passion which claims satisfaction as a natural right."—*Napheys*.

The interests of man and woman are the same. Their object is to promote their own happiness, to prolong their own lives and to perpetuate the race. The higher degree of perfection they attain, the greater their enjoyment, the greater their immunity from suffering. Pleasure should never be bought at the expense of pain. Each succeeding generation should be more perfect than its predecessor. Our race is susceptible of culture but it cannot be trusted to chance.

Certain definite and well regulated laws are in existence throughout the universe. These rules must be understood and obeyed. Obedience will be rewarded and transgression punished. The Providence of God asks nothing unreasonable of us, and will not be likely to suspend any of Its rules to favor an erring mortal. Ignorance will not be accepted in extenuation of disobedience. The child that puts its tiny finger into the fire, ignorant of what the result will be, is as certainly burned as the older one who knows the consequences. The insane man leaps from a precipice and is dashed to pieces on the rocks below. He breaks the law of gravity, and pays the penalty with his life. The law of gravitation is not suspended because he is unaccountable for his act. So with all other natural laws.

Pain is the result of having broken some law. Had the law not been broken the pain would not have been felt. These are facts. They look us squarely in the face. We may reason from cause to effect, from effect to cause, the result is the same. The question is plainly presented to every individual, is immunity

from pain and suffering worth the little effort required to prevent them? It is proposed in the following pages to consider some of the causes of pain, and teach prevention. As we improve our condition and knowledge greater results may be anticipated, but we shall derive immediate benefit. Improvement is a forced state, if we relax our efforts we shall be extremely liable to retrograde.

We have shown that it is a fixed law that the capacities and dispositions of the parent are engrafted upon the offspring. Sick parents beget sickly children. Parents who keep their sexual functions in a state of excitement beget children that will be precocious in this direction. Consumptives beget consumptives. Venereal diseases descend through several generations, blighting the lives of many in the descent. Stock raisers study the law of hereditary transmission, and is the human race of less consequence? All these considerations have a more or less direct bearing upon the pains and perils of child bearing, and it is designed in the following pages to specify these causes, explain their operations, point out both preventatives and remedies, and render each woman capable of painless childbirth.

CHAPTER II.

MATERNITY.

The office of maternity is peculiarly that of woman, and is the highest and holiest to which she can aspire. Its attainment requires many sacrifices, which she is ever ready to make, and she considers herself amply repaid for the pains and perils she has to undergo when she clasps to her breast her new-born babe, the culmination of her anxiety, the central object of her affections; to her the crowning blessing of earth.

Maternity is a legitimate object of woman's existence, to be attained only through the exercise of a certain function, which for the welfare of society is not to be indulged outside of the marriage institution. For this reason, if for no other, the parties to a marriage contract should study the law of adaptation. Each

party should possess good health, be free of any hereditary taint, and be by disposition prepared to reciprocate the love of each other. To love and be loved, to forgive and be forgiven, is essential to the happiness of both.

Philoprogenitiveness, or love of offspring is a faculty that "renders children the richest treasure of their parents, and casts into the shade all the toil and expense they cause, and lacerates them with bitter pangs when death or distance tears them asunder. It is much larger in woman than in man." The father may love his children, earnestly, ardently, but it is different from the love of the mother. His affection may be turned away from them but the love of the mother endureth to the end.

The intensity of a mother's love is manifested in the sacrifices she makes to secure her child's happiness. Perhaps, forsaken by the father of her babe, she struggles on alone in the world, careless alike of frowns and hardships, only intent upon its welfare. Dying, her last prayer is for her child.

She deprives herself of innumerable pleasures, foregoes the enjoyment of society, assumes the risks of unknown dangers, endures the pains of childbirth; many times suffering from the earliest period of gestation until long after delivery to attain the joys of motherhood.

Maternity begins with conception, and ends only with the grave. Maternal instincts may exist in early life, and in the barren, but she must pass through the process of gestation and undergo the ordeal of delivery, she must, in a word become a mother before she can fully realize what maternity means. The adaptability of the female to the requirements of this

important office is manifested very early in life—in childhood. While the boy plays with his ball, his horse and gun, manifests ambition, courage, power, exhibiting his aspirations to manhood, the little girl plays with her doll, imitates the matron, and by word and act indicates her wishes for a "real baby" long before she can possibly realize, even in the slightest degree, the difficulties and dangers the gratification of her desires imply.

Though it is through sexuality that maternity is to be attained, the maternal instinct is entirely distinct from the sexual impulse, and the realization of maternity is often experienced without any knowledge whatever of sexual gratification on the part of the mother.

Professor Laycock says that "maternity is the first and fundamental duty of the female, the male never in a single instance in any organism contributes nutrient material." Madame Sirrey said "those women who comprehend their rights and duties as mothers of families certainly cannot complain of their destiny." The office of maternity is respected the world over. In ancient Rome the house of the newly made mother was designated by the suspension of wreaths over the door to prevent intrusion, and as a mark of reverence. To encourage this holy office various countries have legislated in its favor, and pensions have been awarded women who have borne many children.

All women are not fitted for the duties and responsibilities of this holy office. There are a variety of circumstances that should be considered in contemplating maternity. When one or both parents are suffering from diseases that influence primarily their vitality, and are liable to be transmitted to their progeny, *they have no right* to bring beings into the world

who must perpetuate the parents' misery by a life of continual suffering. Diseases or infirmities which threaten directly the physical or moral life of the individual, are propagated, above all, by generation.

The different forms of mania are liable to be aggravated by genital transmission. Epilepsy is liable to degenerate into cerebral maladies in the offspring. Consumption perpetuates itself in the race, and may become contagious for the other parent. Uncured syphilis is transmitted through several generations. Scrofula, unless opposed by an excellent vital condition in one parent will be intensified in the children. Improper temperamental alliances often develop disease among children where it had not been manifested in the parents. We should seek in marriage to neutralize by opposing constitutions, temperaments, and predispositions, the morbid hereditary elements which may be found in husband and wife. Marriage alliances should never be contracted between two persons who are essentially the same in temperament; who are lymphatic and scrofulous, nervous, phthisical, etc. We should seek to oppose the debility of one parent by a strong constitution in the other. When matrimonial contracts are formed contrary to the above rules, the wife should sacrifice her maternal desires for the welfare of the being she would otherwise bring into the world, lest she entail upon the prospective object of affection a life of continuous misery. Among the lower animals the most studious care is taken to breed only from the very best quality of stock, quantity is sacrificed to quality; *and is the welfare of the human race of less importance?*

We contend that no parents have a right to beget more children than they can comfortably support,

and we appeal to the nobler sentiments of our fellow men in support of our position. We assert that it is the privilege of every woman to control her maternal functions, to say *when* she shall have children, and *how many*. It does not follow because she is married that she shall be robbed of her health and every enjoyment in life, in compliance to the sexual behests of her companion, and no man of feeling, sense, or decency, will be willing to see the health, the beauty, and the enjoyment of his wife sacrificed to excessive childbearing.

A host of writers, medical and non-medical, are arrayed against the subjection of woman to the infamous laws of modern civilization, which are too often upheld by religion. By the laws of our country it is a criminal offense to *procure*, or aid in *procuring*, or instruct any woman by what *means* she can regulate the number of her offspring by preventing conception. Under this law she must beget children, even though she knows they must suffer and die of some hereditary malady. Under this law she must beget children and bring them up in poverty, and subject them to starvation, vice and crime. But one alternative is left, and that is the criminal one of *faeticide* or *child-murder*! Indeed this law demands that she sacrifice health, happiness, principle, and even life, in obedience to the demands of this most infamous enactment in the passage of which she had not even a minority vote.

Gould the one single law of Providence governing reproduction be suspended or reversed, and every man be compelled to have just one child, even though they might have the benefit of the following rules, the first act of our next legislature would be the repeal of this

obnoxious law, and every man would provide himself with a preventive.

The distinguished writer, John Stuart Mill, said, "It is strange that intemperance in drink or any other appetite should be condemned so readily when incontinence in this respect should always meet not only with indulgence but praise. Little improvement can be expected in morality until the producing too large families is regarded with the same feeling as drunkenness or any other physical excess."

The eminent Raciborski in taking the position that avoidance of offspring to a certain extent is not only legitimate, but should be recommended as a measure of good, said: "We know how bitterly we shall be attacked for promulgating this doctrine, but if our ideas only render to society the services we expect of them, we shall have effaced from the list of crimes the one most atrocious without exception, that of child-murder, before or after birth, and we shall have poured a little happiness into the bosoms of despairing families, where poverty is allied to the knowledge that offspring can be born only to prostitution and mendacity. The realization of such hopes will console us under the attacks upon our doctrines."

Dr. Edward Reich says: "After reviewing the multitudinous evils which result to individuals and society from the too rapid increase of families, it is much to be wished that the function of reproduction be placed under the dominion of the will."

Dr. Napheys remarks: "Men are very ready to find an excuse for self-indulgence, and if they cannot get one anywhere else they seek it in religion. They tell woman it is her duty to bear all the children she can."

In his work on *Fecundity, Fertility and Sterility*, Dr.

Duncan, in considering the subject of the size of families, says: "Neither the arguments of Malthus, nor any others apparently justify us in calling on a healthy couple to limit the number of their children, when they will receive a fair education and such an outfit as will enable them to produce so much wealth by their labors as will probably insure them against want. It may well be doubted, whether for the sake of self-indulgence, and with a little more wealth, such a couple would be justified in placing a limit to the number of their children. But think of another and too frequent case. Think of a man and woman struggling with poverty, absolute or relative, with more children already than they know how to educate, to clothe, even to feed! Think of the woman bowed with ill health, peevish from petty trials; think of the children, each on its arrival regarded as a misfortune if not a curse, growing up unhealthy, ill-cared for, dirty, ignorant, with no better prospect than to repeat the life of its wretched parents. Would these parents do wrong in refusing to be instrumental in multiplying a race of paupers? Between these two extremes, may not each man and woman ask themselves the question, whether *any* duty obliges them to procreate children whose advent they will deplore.

"Some may be shocked even at the question, regarding the births of children as the special intervention of Providence. We shall not quarrel with these persons, remembering what are the faculties and possible destiny of each child born; but we cannot refuse to see that Providence will not send children without some action on our part. There is no obligation binding on men and women to begin the begetting of children; having begun, must they go on performe?

The argument as to interfering with Providence is quite disregarded now as to epidemics, and it is a little difficult to see the distinction between interfering to prevent excessive deaths and excessive births. Indeed, if we do disturb the old balance by preventing a high death-rate, it seems almost incumbent on us to restore the equilibrium by diminishing the birth-rate. It seems a strange doctrine that we, with our privilege of free-will, with reason, with religion for our guides, shall be debarred all choice in this matter, and be reduced to a level with brute beasts, each species of which is limited by death and suffering alone. We wholly disagree with those who indulge their senses and expect Providence to protect them from the consequences of their incontinence."

I am convinced from careful study and extensive research that society or population would not suffer if the act of generation was wholly under the dominion of the will, for there are as many sterile women who desire children, as there are fertile ones who wish to avoid them. The force of this observation is more apparent, when we assert that in about ninety-five per cent. of cases of sterility the barrenness may be corrected.

The intelligent and impartial consideration of the subject is necessary, and should be taught rudimentally in our schools, even though it were advisable to establish special schools for the purpose. The law against preventing conception does not regulate the number of illegitimate children, nor diminish prostitution; for if the fear of conception is the only barrier the law opposes to the unlawful indulgence of the sexual propensities, it is too feeble to merit a moment's thought. The immoral care nothing for it, while on the other

hand, wives who cannot resist or evade the responsibilities, are compelled to beget offspring under circumstances of the most lamentable and cruel kind.

"Had woman the possession of herself, and the control of her maternal functions and duties, instead of grieved sufferings and privations, she would have health and beauty, not only of her own organization, but she would become the mother of children equally vigorous and lovely. Surely nothing is more wicked than to bring into the world such numbers of helpless and innocent beings to doom them to poverty, ignorance, and crime, because of their parents' inability to make necessary provision for them."—*Pancoast*.

I have no wish nor intent to break any law nor encourage others to do so, no matter how unjust it may be, but for the sake of the oppressed, I seriously hope the attention of legislators will be given to the matter and that it may receive proper scientific investigation.

The influence of the mother over the career of her child is immense, and it should be rightly directed. A noted divine has well said, "to be good mothers of men and women is the greatest thing in all this world," and we will add the better the mothers the better the children in every respect, for

"The hand that rocks the cradle is the hand that rocks the world."

Physical conditions may be cultivated but the germs must first exist. It is difficult to give other than what we have, or transmit what we do not possess.

It is a mistaken notion among many newly married people that they do not want children. Many who have thought thus have had occasion to regret their folly when later in life the wife finds herself permanently sterile, or finds herself suffering from dis-

ease which the unphilosophical, and unphysiological methods of preventing conception she has practiced entail.

The age of the wife has an important bearing upon not only her health, her fertility and severity of labor, but upon the constitution of her offspring. Every man and woman should possess a plenitude of life before they communicate it to another. The body should have attained its growth for at least a year, and every function be fully and perfectly established. After puberty the pelvis of the female undergoes important anatomical changes to fit her for child bearing. These changes require time—several years—and it is not until they are completed that she is fully qualified to perform her part in the process of reproduction.

Comparison of the skeletons of males and females after puberty shows a marked difference in their relative breadth and depth, that of the woman being greatest, for two reasons, viz : The accommodation of certain organs which are peculiar to her alone, and the easy expulsion of the fetus when conception is completed. The age at which this pelvic difference matures varies from twenty to twenty-five, and conjugal unions should not, on an average, be formed prior to the earliest period indicated. Between twenty-five and thirty is the period of the greatest fertility, and first confinements between these ages are least difficult and dangerous.

Aristotle observed that “to the female sex premature wedlock is particularly dangerous, since, in consequence of anticipating the demands of nature many of them suffer greatly in childbirth, and are liable to produce imperfect offspring.” His observations are

fully confirmed by writers of the present day. The children of such marriages are sickly, puny and defective in mind and body. They inherit more readily the defects of their ancestors, and as a rule die at earlier years than the progeny of better timed unions.

Dr. Napheys says, "A too youthful wife finds marriage not a pleasure but a pain. Her nervous system is prostrated by it, she is more liable to weaknesses and diseases of the womb, and if of a consumptive family, she runs great risk of finding that fatal malady manifested after a year or two of married life. It is very common for those who marry young to die young."

Admitting that there are many exceptions to this rule it is no argument in favor of early marriages, because there is nothing to be gained except in rare instances. It has been argued in favor of early marriages that uterine diseases in young girls are sometimes cured by it. The risk is too great, for in every case where one has been benefitted, hundreds have been made worse. My own observations of the results of early marriages conform to the foregoing. Many mothers have suffered from uterine and nervous diseases, while their children have possessed puny constitutions.

On the other hand, marriages late in life are equally objectionable. Barrenness is more frequent after thirty, while the first labors after that age are apt to be more protracted and dangerous. The farther this period has passed the more rare first births become, and at forty-six the child-bearing period of woman ceases entirely, though some notable exceptions have been known.

The occurrence of pregnancy occasions peculiar changes in the mental and physical condition of the

prospective mother. The menstrual function is suspended, and a profound impression is made upon the nervous system. Changes in the breasts occur. The appetite is often changed, peculiar, depraved. There may be unnatural longings for certain articles of food, salivation, heart burn, palpitation, pains in various parts of the body, etc. Mental peculiarities develop; the pleasant, confiding, gentle, gay, loving woman becomes hasty, passionate, jealous, and bitter. Sometimes those who are naturally bad tempered become much more pleasant. During the first two months the abdomen is less prominent than natural, and may even continue until after quickening, but after this time it steadily increases until delivery.

One of the most annoying symptoms of gestation is morning sickness. In some instances it becomes so severe as to seriously endanger life. It has been an old axiom that a sick pregnancy is always a safe one, and that the absence of nausea and vomiting foreboded danger to the mother or child. For my own part I cannot understand why a condition so extremely unpleasant is a healthful one, nor can I understand why a condition of the stomach that is pathological to a non-pregnant woman, should be physiological to a pregnant one. My own observation does not coincide with the time-honored proverb, and I prefer to believe that nausea and vomiting depend upon conditions, that it is not only desirable, but proper, to relieve. In a large per cent. of cases that are so severe as to require professional attention, it is evident that in the early stages the irritability of the stomach is propagated to the stomach through the sympathetic nervous system, from the uterus and its appendages. Anything that renders the nervous system weak and irritable is capa-

ble of producing this condition. Experience has proved that remedies addressed to the stomach for the vomiting of pregnant women are generally futile, while remedies addressed to the nervous system succeed. The application of a small quantity of chloroform over the pit of the stomach, lessens, or for a time suspends the irritability of the gastric nerves and controls the vomiting. The injection of a strong solution of bromide of potassium into the rectum, allays the irritability at its source, and relieves its remote influence. The dose for the purpose should not be less than a dram in an ounce of warm water. Where the sympathetic vomiting has set up an actual inflammation of the stomach, then it will be necessary to address remedies to the stomach as well as to the nervous system.

We have already referred to the influence of the mother upon the health and character of the child, and it will not be out of place if we here briefly consider the subject of mothers' marks and beautiful children.

Although there is a great diversity of opinion about how mothers' marks are produced, yet the very fact that they do exist, is evidence that there must be some cause. We will no doubt always be confronted with instances in which these marks cannot be traced to any assignable cause, and on the other hand "assignable causes," will have proved inoperative. The profession have very generally conceded that the mind is capable of producing certain diseases in various organs, and that it has been instrumental in curing such diseases when they have existed. Admitting this fact, together with the hereditary transmissibility of

disease, we can understand how these marks are produced.

Some writers have urged that there is no nervous communication between the mother and child. While we will not debate this point, we are certain there is a direct communication through the blood, which is sufficient, were we to leave "sympathy" entirely out of the question, and if *one* quality may be transmitted through this medium, *why may not others?*

No one will attempt to deny that during pregnancy the mother is unusually susceptible to external impressions, and in view of the accumulated evidence, we regard it safe to state that any external circumstance that is capable of making a profound or prolonged impression on the mother, may through the blood or sympathy affect the child in *utero*.

We might bring forward numerous instances to substantiate our views but we regard them as entirely unnecessary. Every neighborhood has its examples. The prospective being is really a part of the mother herself, and will be subject, to a very great extent at least, to the same influences.

A practical conclusion suggested by this consideration is to remove the prospective mother as far as possible from the operation of those influences that may make unfavorable impressions upon the fragile structure of the unborn, and surround her with such influences as create a healthful, cheerful and agreeable state of the mind. This should be remembered by husband, attendants, associates and all who are brought in contact with her. The mind should be agreeably occupied—refinement, pure emotions, noble sentiments, equanimity, should be cultivated, together with everything that contributes to good nature, enjoyment and seren-

ity. Avoid the presence of unsightly and disagreeable objects, and as quickly and quietly as possible divert the mind from them. Gratify unnatural "longings" as far as is consistent with reason and circumstances, and thus terminate their influence. Do not worry yourself about something you cannot help, nor anticipate troubles that may never come to pass. Cultivate control over the will. Dismiss unpleasant thoughts and unreasonable fancies as quickly as possible; think of something else; do not listen to the horrible and terrifying stories which neighboring gossips delight to tell, nor be kept in a state of terror and anxiety about the termination of the conception, by the yarns of those meddlesome old grannies who are always knowing to some case that was just like yours, and something happened. Every community is unfortunately cursed by such busybodies. Heed them not; they are no more capable of judging of your condition, or predicting the future, than they are to be president, and their tales are nearly always imaginary. Contemplate grace and beauty, and by such a course you will be not only likely to avoid mothers' marks, but beget healthful, talented, beautiful children. In a word, keep the mind free from unpleasant subjects, unhappiness, anxiety, anger, etc., but filled with agreeable fancies and charming images; cultivate graceful attitudes; remember that your course now must be reflected in the future character of your unborn babe. The ancient Greeks believed in surrounding pregnant women with statuary, paintings and engravings, representing pleasant and delightful scenes, and physical perfection, and with good results.

It is well known that artificial feeding is one of the fruitful causes of infant mortality, consequently when

no physical condition exists to prevent it, every mother should nurse her own child. With birth the cares of maternity are increased, and the obligation is imposed upon the mother of nourishing the little being she has brought into the world. Science has pointed out that it contributes to her physical welfare, and is to most mothers one of the pleasures of maternity.

CHAPTER III.

IS PAIN NECESSARY?

To the child-bearing woman few questions are of greater import, and it is to be hoped the writer will be able to convince his readers that the question may be truthfully answered in the negative.

When we observe the little suffering the lower animals experience in bringing forth their young, we are at once led to enquire, is it necessary that the human female, created in the image of God, should suffer as she does in childbirth? Why is *she* specially selected to endure such agony? Can the Almighty have any special design in afflicting her thus?

Physiologists tell us that the healthy performance of any function is unattended with pain. Natural

processes are painless; pain is the result of a morbid condition. It is conceded that child-bearing, being necessary to the perpetuation of our species, is the natural function of woman: consequently, if we accept the doctrines of physiology, we can only infer that *childbirth should be without peril, AND WITHOUT PAIN.*

We cannot believe that the Almighty ever intended woman should suffer such terrible misery, while her male companion, equally interested in its results, should wholly escape. If such be the design and it is necessary, then why do some suffer so much more than others? If the descendants of Adam are enabled by any means to practically escape the curse pronounced in the garden, why not the descendants of Eve?

This may seem sacrilegious to those who are ever ready to blame Providence for their mishaps; but while we respect the opinions of all, we cannot help noticing that those who are the most ready to attribute to the dispensation of Providence all their ills, are generally very prompt in seeking human interposition to mitigate the suffering occasioned by such special dispensation. A genuine attack of colic or cholera morbus will take the special dispensation doctrine out of a man in very short order, and though he may pray for another special dispensation to relieve him, he is generally anxious that a speedy messenger be dispatched for a doctor about the same time; and what is colic or cholera morbus in comparison with the pains of childbirth? Let those who have experienced both, answer. If it is right to relieve the pains of the one by human efforts, is it not right to relieve or prevent the agony of the other?

The truth is, Providence is no more to blame for the

sufferings of one individual than of another, and will not suspend or reverse any law to accommodate anybody. We are born subject to certain organic laws, and if through willfulness or ignorance we violate them we must suffer the consequences. Providence is no more to blame for disease and pain than for picking of pockets, or stealing horses. We have charge of our constitutions, and if we will not learn how to care for them—learn how to prevent disease and pain, then we must suffer them and no interposition of the Almighty need be expected, nor will the plea of ignorance be accepted in extenuation.

For our part, we cannot believe the Almighty the cruel, merciless tyrant many picture Him, but believe in His wisdom, mercy and justice. He has placed at our disposal abundant means for our relief if we will but comprehend and apply them.

It is not our purpose, however, to discuss the pain question upon its theological merits, still if there is the efficacy in prayer that has been accorded to it, if the pains of childbirth are a consequence of the curse uttered in Genesis, 3, 16:17, and if the purposes of the Almighty are ever changed, it would seem that there has already been prayers enough offered for woman's deliverance to have effected it, for certainly she has suffered enough to satisfy the Devil, much less a God.

Perhaps some enthusiastic Malthusian will set up the claim that the pains and perils of childbirth are necessary to constitute a check upon over population. If that is the case, it would appear that after being tested six thousand years and proving a failure, it is about time the plan is abandoned and some other one tried.

It is very evident that all women do not experience the same degree of suffering, and we infer there must be some good reason for the difference, every effect must have a cause, and the question arises are we not capable of ascertaining the reason why some suffer less than others, and by applying the same conditions to all, ameliorate the suffering of all?

Travelers tell us that the females of uncivilized nations suffer less in childbirth than those of civilized, and we cannot entertain the idea that the heathen mother is more a favorite in sight of Heaven than her christian sister. Hence some other explanation is necessary, and we come to believe that the difficult, painful and tedious labors are due to some physical condition of civilized woman, which the uncivilized escape.

The uterus is a hollow muscular organ, that gradually enlarges as gestation goes forward until the termination of pregnancy, when for certain reasons unnecessary to consider in this connection, it contracts, and, after repeated efforts, expels its contents, amidst intense suffering.

The heart is a hollow muscular organ, that by its alternate expansion or dilation and contractions, receives the blood from the veins, and sends it coursing again through the arteries to every part of the body. Its contractions are forcible, and represent an amount of muscular power immensely greater than the uterus.

The stomach is also a hollow muscular organ, that by its contractions and motions, churns, mixes and comminutes its contents until prepared for expulsion.

The bladder is another hollow muscular organ, that

dilates slowly as the urine accumulates within its cavity, until a certain degree of distention is reached, when it contracts and the urine is expelled.

All of these organs are supplied with nerves of sensation, yet they perform their natural functions without pain.

The general structure of the uterus is similar to the other organs mentioned, and expels its contents by contractions, in a manner similar to the others, then why should its operations be attended with pain and the others escape? The reason is plain. The heart, stomach, and bladder, are in a healthy condition, and in that condition not sensitive to pain. Let them become affected by disease, and every contraction they make is performed in agony.

In dyspepsia the stomach becomes diseased, and the dyspeptic knows what it is to suffer; yet he does not believe his pain is necessary, and quietly submit to it without an effort to effect a cure.

Inflammation and other diseases of the heart creates intense suffering and disturbs every function of the body.

When irritation or inflammation of the bladder occurs, every contraction is attended with the most excruciating agony.

Thus it must be apparent that when these organs are in a healthy condition their functions are painless, and are performed in an almost unconscious manner, but when a pathological state is developed, agony is the result. From this we rationally infer that the reason the contractions of the womb are attended with pain is because some morbid condition of it or adjacent structures exist.

All accouchers have remarked that cases are often met where the contractions of the womb are prolonged and vigorous, and yet the woman will complain very little. From this we are led to infer that the anatomical construction of the parts are favorable to the process, and that the uterus and its attachments have not been rendered sensitive by morbid conditions. A healthy uterus is not sensitive, and parturition should be painless.

The eminent obstetrician, Dr. Dewees, argued that "*pain in childbirth is a morbid symptom*; that it is a perversion of nature, caused by modes of living not consistent with the most healthy condition of the system; and that such a regimen as should insure such a completely healthy condition might be counted on with certainty to do away with such pain."

Prof. Huxley says, "we are, indeed, fully prepared to believe that the bearing of children may, and ought to become, as free from danger and disability to the civilized woman as to the savage."

Pancoast in his *Ladies' Medical Guide*, says, "It is a common belief that gestation is a period of disease and suffering, and that parturition is inevitably a painful and dangerous process. Now the great truth yet to be learned, is the reverse of such impressions. It is just as natural for a woman to bring forth children as for a shrub to produce flowers and fruit. In a state of health no natural process is painful. Pain, in all cases, is a sign of disease—it has no other significance. In its healthy condition, the uterus receives the germ of a new being, provides it with proper nourishment, expands to make room for its development, and, at the time appointed by nature, dilates its

opening and contracts—a series of involuntary and painless muscular efforts,—so as to throw the infant into the new existence, which its growth demands. It performs its own proper functions, just as the lungs, the heart, or the stomach perform theirs; because it was formed by the same Infinite Wisdom and Goodness, who ordained that pain and sorrow should be the consequence of sin, and who ordains that health and happiness shall ever be the result of obedience to the laws of life."

It is well known that the slave women of this country required very little or no attention at confinement. Their labors are generally of short duration, the pain moderate, and the woman is not incapacitated from performing her usual avocations only a few hours.

Among the poorer classes, *i. e.*, those who are robust, but compelled to depend upon their daily toil for the necessities of life—the plainest food—to whom luxury is a stranger, we often find the labor easy and speedy, and often with no attendant, except perhaps the husband or a little girl—not even a midwife; the woman gives birth and in a few hours resumes her usual duties.

It is generally known among the American Indians that the avocations of the squaws are seldom if ever interrupted by an inconvenience from pregnancy or labor, except for a very short period at the time of birth. My brother-in-law, Dr. S. T. Baker, who has spent many years on the western frontier among the Indians, where he had excellent opportunities to observe and acquaint himself with their habits, informs me that a pregnant squaw does not occasion any concern from her companions. She performs the usual

drudgery of her life up to the very hour of her labor, making no preparation for the coming "pappoose." When she realizes that the hour for delivery is at hand, she enters her cabin or betakes herself to some stream or spring, gives birth, washes the young "Injun" in the cold water, straps it upon her back, and before she has been scarcely missed at all, has returned a full fledged mother, and resumes her labors unconscious of having undergone any very wonderful ordeal. If the band to which she belongs is on a march when she feels that labor is upon her, she leaves the trail and beside some brook or spring spreads her blanket, is delivered, washes the infant, straps it upon her back, mounts her pony, gallops on after the rest, which she overtakes, after one or two hours absence. If they experience any of the annoyances of pregnancy that afflict the daughters of artificial life, they pay so little attention to them as to attract no notice whatever.

Caseaux remarks: "There are certain females who have the happy privilege of being delivered without any, or at least very inconsiderable pain. I had the opportunity at the *clinique* of observing a young woman in her first labor, who was aroused by the pains at four o'clock in the morning and was delivered at six. During these two hours she suffered so little that she did not consider it necessary to alarm any one, until the pains became a little more severe, when the midwife was summoned and found the head had been delivered."

Nearly all physicians can recall cases in their experience when, having been hastily summoned, they have found on their arrival a few minutes later, that

delivery was completed, and that they had been summoned as soon as the woman herself realized that the labor had begun.

In an English work on midwifery we find the statements "that a respectable lady, the wife of a peer, was actually delivered once in her sleep. In another instance a woman bore eight children without ever having labor pains, and her deliveries were so sudden and devoid of sensible effort, that, in more than one instance they took place under very awkward circumstances."

While practicing medicine in the eastern part of this state, several years ago, I was called several miles into the country to attend a case of obstetrics. On my arrival the husband informed me "that his wife was not much sick, and that he guessed that it was a false alarm." As it was storming violently and was near the dinner hour I concluded to have my horse cared for and get dinner myself before my return, whether it was necessary to stay longer or not. On entering the house I found the wife assisting in getting dinner which was nearly ready. She remarked she was sorry to have called me out in such a storm for nothing. Dinner over she resumed her household duties, but suddenly sitting down in a chair remarked that it was not a "false alarm" after all. We assisted her upon a bed as quickly as possible, and in less than five minutes from the time she called her husband the child was born. The after-birth was soon delivered, and a good recovery followed. She assured me she had not experienced any pain.

Such cases could be indefinitely multiplied did space permit, or if it was necessary, but admitting

them to be exceptional cases, they prove the possibility of painless childbirth.

We know there are many authors who regard pain as essential to childbirth, and think woman must ever suffer as she does now, and we have been not a little surprised in examining obstetrical literature to find how little attention has been paid to considering the causes of pain, or to any effort towards prevention. The idea of making childbirth easy seems to have been wholly overlooked in the endeavors to develop means to relieve difficult labors. Evidently they have regarded this grand function of the uterine system a pathological instead of a physiological process.

The duration of labor is a subject upon which considerable difference of opinion prevails. On account of the change the abdomen and its contents undergoes at the time, the delivery should not be so quick but that the contractions of the abdominal muscles may have time to adapt themselves to the change, and from one to three hours is not too long. This however is a much shorter time than is usually occupied, and labor is said to be "natural" when it lasts from six to thirty-six hours, and the woman kept in bed two or three weeks. The dangers to be apprehended from too rapid delivery are rupture of the perineum, flooding, or syncope.

From the foregoing it must be evident to the unprejudiced mind that childbirth is a natural process, when the mother lives in accordance with the laws of health. Natural labor is an easy, short, and painless act. Natural labor is never painful. The organic nerves that supply the uterus are never sensitive in a healthy state. Irritation, debility, congestion and in-

flammation render these nerves sensitive and painful. All pain, difficulty, and danger are the consequences of violating natural laws. Banish disease, enforce vigorous hygiene, establish health, and labor will not be difficult.

All of these assertions will be proven as we proceed, and full directions for relieving the pain or of preventing it will be given, that will convince those who try it that pain in childbirth is unnecessary.

CHAPTER IV.

CAUSES OF PAIN.

The causes of pain at childbirth are various and may depend upon the condition of the mother, or upon the condition of the child. These causes may be either remote or proximate, direct or indirect. In some cases the causes will have ceased long ago but their effects will remain. Unhygienic customs beget morbid conditions and thus render natural processes painful. Any cause that can retard or oppose delivery and protract labor increases the suffering of the mother, and if continued beyond a certain point, endangers the life of both mother and child.

Childbirth to be proper and painless requires that the shape of the mother be perfect, every organ must be developed, and the pelvic bones be anatomically correct in shape, no deformity is admissible, the distance from the junction of the pubic bones to the sacrum must be sufficient to permit the passage of the child without too great a degree of pressure. There

must not be any unnatural obstructions. The abdominal, pelvic, and uterine muscles must possess sufficient power, that when expulsive efforts begin they may complete the process without undue delay. The nervous system must be quiet, and the mind must be at ease. Every tissue must be healthy, no morbid conditions present. Then the child must not be deformed, too large, nor its bones too much ossified. Secure these conditions and labor will be materially shortened in duration, and the suffering reduced to a minimum.

Modern social customs impose upon woman artificial modes of life, that impair her constitutional vigor, deform her body, pervert her functions, render her an easy prey to uterine diseases, and to prolonged and painful childbirth. These customs are indirect or remote causes of pain, because they create conditions of life, which in their turn render pain unavoidable. The uncivilized mother uninfluenced by fashion, the abdominal and pelvic muscles well developed by the exercises to which her life subjects her, her hips broad and deep to support the burdens she must often carry; her nervous system not rendered acutely sensitive by debility or disease, almost entirely escapes the pains and perils of childbirth to which the society woman falls a victim.

Bring the matter nearer home, and let us compare the slavery of the two classes; the one woman a slave to fashion and society, the other a slave to physical necessity. The first, malformed by dress, the muscles undeveloped, and the sensory nerves intensely sensitive from manner of life and disease, suffers long and severely at such times, while the other well formed by nature, developed by the exercises her position in

life necessitates, with no irritable or inflamed nerves to annoy, pays no attention to it farther than the inconvenience occasioned by a few days absence from work and the additional tax upon her resources for the maintenance of her child. Again, during pregnancy and probably for some weeks after delivery the suffering of the fashionable woman has been continuous, while the other has scarcely noticed her condition.

There is a noticeable difference in the degree of the anterior curvature of the spinal column at its lumbar portion, between the lower ribs and the hips, in the two classes of women; the society lady's back bending inward or forward considerably the most, so that the power of the vertebral pile to support weight from above downward with ease is diminished on account of the greater angle, giving rise to the sensation of "backache as if it would break in too."

This is one of the results of tight lacing and insufficient physical culture, and to any one who will consider physical laws, its influence in producing female diseases, in prolonging labor, and increasing its pain, must be obvious. This increased curvature throws the abdomen forward beyond the direct line of the body, and in childbirth much of the abdominal muscular effort, particularly of the diaphragm, is lost because it is expended in the direction of a line with the pubic bones instead of the cavity behind them, the pubic bones opposing a force that no muscular effort can overcome, even were such a result desirable. In such cases the labor is protracted on account of the improper direction of the muscular force, which is often feeble on account of the customary inactivity of the muscles preventing their natural development.

The woman who in her daily labors is compelled to perform such exercises as develop all her muscles, particularly the erector muscles of the spine, to support the heavy weight she is often obliged to carry, by developing a natural condition, prevents the extra curvature the other sustains, so that when labor comes upon her, her abdominal muscles acting in harmony with the efforts of the uterus, effect an easy and quick birth, because no force nor effort is lost by being directed in a line contrary to the direction the child must take to make its exit.

This cause operates to produce many of the diseases of women which it is not the province of this little work to consider, but which will be fully considered in a popular work on the diseases peculiar to women which the writer has in contemplation.

Another way in which tight lacing becomes a cause of painful childbirth, is, by confining the movements of the diaphragm so as to enfeeble it, at the same time the abdominal viscera are compressed into a space too small for the healthy performance of their functions, and being prevented from escaping upward, naturally gravitate downward, and by their pressure displacing the organs of the lower abdomen into the pelvis. The circulation is defective, and the vitality of the pelvic organs being impaired, they become congested, sore, tender, irritable, painful—diseased, a condition of things that necessarily causes pain at childbirth.

Deformities of the bony structures of the pelvis necessarily increase suffering and imperil the lives of both mother and child in a direct ratio with the degree of deformity. In such cases child-bearing should not be attempted, for when the deformity is so

great that instrumental delivery is impossible but one of two alternatives remain, Embryotomy or Cesarean section, the first of which sacrifices the child, and the second is pretty certain to sacrifice the mother.

Tumors within the pelvis retard and endanger delivery according to their situation, size and structure, and if they involve or press upon nerve filaments they occasion very great agony. Their removal must be effected before delivery.

Inflammatory diseases of the womb, necessarily increase the suffering. This organ is profusely supplied with nerves which are involved in the inflammatory process and thus become acutely sensitive as every woman who has been affected by it can testify. It is so sore and tender that the slightest touch is painful, much less the severe efforts of parturition. Inflammation also gives rise to another source of pain, a change in the structure of the tissue inflamed, by which its elasticity is greatly diminished. Occurring in the neck of the womb it is easy to see how this may cause pain by interfering with the dilation of the mouth of the womb, a condition that must take place before the birth can occur. In its natural state the circular muscular fibers that exist here, are capable of great distention, but when rendered inelastic by the products of inflammation, the dilation is intensely painful, and may rupture the fibers.

The employment of caustics, and incisions in the neck of the womb for the cure of disease or removal of strictures, is apt to be followed by cicatrices which being inelastic are liable to unequal dilation and an increase of pain. Necessary as these practices may be they are certainly open to this objection, high

authorities to the contrary notwithstanding. Any one having a scar or cicatrix on their person knows that it will not stretch like other tissues and is often very sensitive. Some writers have labored hard to prove that the tissues of the uterus were not subject to the same laws as tissues in other parts of the body, and consequently, the results of inflammation, caustics and incisions, would not affect the womb unfavorably, but it is certainly presuming very much upon the healing power of nature, to say the least.

Any cause that can render any part of the generative apparatus sore, sensitive and tender, whether inflammation, ulceration, swellings, common leucorrhœa, diseases of the bladder, piles, and in fact any thing that impairs the integrity of any tissue, whether of the generative organs themselves or adjacent structures, necessarily increase the sufferings at the time of birth. Undue dryness of the passages may also be considered a cause, and can usually be overcome by artificial means. Any emollient or unirritating oily substance applied freely will answer.

Any thing that increases morbid irritability increases the suffering, which may even be rendered intensely acute even though not the slightest change of structure be visible. This increased sensibility is probably due to some change in the nerves themselves, which in the present state of pathology we are not able to appreciate. One thing however is certain, that morbid irritability is a concomitant of exhaustion, and if the nervous system has been debilitated and irritated by masturbation or sexual excesses an increase of suffering will be pretty likely to occur. Rigidity of the perineal muscles is apt to cause pain in the latter stages of the labor. Sometimes the rig-

idity is so great that the perineum will rupture instead of relax, for the prevention of which slight superficial incisions have been recommended. In this condition anesthetics are beneficial and so are relaxants, if the treatment previous to this time has not been proper, (see subsequent chapters.)

From the time when labor begins until it terminates, there is usually more or less continuous suffering of variable intensity, so that speedy delivery is desirable, as a means of ending the suffering. The labor however should not be so short as to occasion the dangers alluded to in a previous chapter.

The condition of the child as a cause of pain remains to be considered, and is of the very greatest importance because we have it in our power to control the condition of which we are about to speak without danger or detriment to the child or mother.

The average weight of the newly born child is said to be seven pounds, some are considerably smaller others much larger. I have seen children live and thrive that did not exceed five pounds, and I have been present at several confinements when the child's weight exceeded ten pounds, and one instance when the child weighed fifteen pounds. Births are said to have occurred when the child has weighed eighteen pounds, but such instances are exceedingly rare, and must certainly be difficult and painful. The reasons are obvious.

Beyond a certain size, as the weight of the child increases under ordinary circumstances, the pain and difficulty of the labor increases. Dropsy of the head increases the trouble. Wherever the head will pass, if there is no deformity the rest of the body will pass, the passage of the foetal head always being the most

difficult and painful part of the entire process of parturition. The larger the child of course the larger the head will naturally be, so that it is a proper consideration to enquire how we may with safety to both mother and child, control the growth of the child *in utero*, and we introduce the subject here, because it has a direct bearing upon the suffering of the mother. It requires no argument to convince any one that while a small child may be born with little or no difficulty or pain, the same mother may find it absolutely impossible to give birth to a large child, to a child with a large head, or a deformed child.

We now come to consider the bony development of the child as a cause of pain and difficulty at child-birth. It is often a subject of remark that the formation of bone in the skulls of some infants at birth is not nearly as far advanced as in others, yet such children thrive equally well.

At birth the bones of the cranium have not been united by the ossific process, but admit of considerable mobility, so that by pressure the shape of the head may be materially changed, temporarily, without injury. Applying these observations to the transit of the child through the maternal passages and we speedily arrive at the conclusion that the softer, more spongy, cartilaginous these bones are at birth, the more compressible the head will be, and the more readily it will adapt itself to the passage, changing according to the necessity, while if the process of ossification—bony development—is well advanced, such adaptability cannot take place, the labor will be more difficult, greater pressure will be necessary and more pain experienced.

Everybody is well aware that a soft body or sub-

stance the same size of a hard one, will readily pass through an opening or tube, through which the hard body cannot pass at all, or only with great difficulty.

In the early stage of development bones are soft and flexible, being composed of animal matter, *gristle*, but gradually become hard by the deposits of calcareous matter—lime, within their structure. All bones do not undergo this hardening process simultaneously but it is completed in different bones at different periods of life. There seems to be no good reason why the bony system should have progressed beyond the cartilaginous stage of development at birth, for there is plenty of time after this event for osseous development before any very great necessity for the presence of bone will be experienced by the child.

It is a well established fact in physiology and therapeutics that when bony development is tardy and the bones are incapable of supporting the weight of the body, protecting its cavities, or preserving its symmetry, even when the process of teething is delayed, the administration of some of the preparations of lime as a medicine, or the selection of a diet containing considerable lime, is productive of good results. The lime administered artificially as medicine or naturally as a food, supplies the deficient constructive element and the development of bone goes on to completion. This being the case the questions naturally arise: If we can increase the supply of bone producing material when deficient, can we not diminish it if excessive? If we can hasten development, can we not retard it? If we can retard it after birth can we not before birth? If we can retard ossification before birth then why can we not absolutely con-

trol the condition of the child's head and keep the bones sufficiently flexible to admit of easy delivery? All these queries can be answered in the affirmative. Experiment has proven that such results are not only possible, but that they are safe and practical.

Nervous excitement may be a cause of pain. It is well known that some persons suffer far more from the same cause than others, and it is reasonable to suppose that the more nervous the woman is during gestation and delivery the more intensely she will suffer. It is those who lead artificial lives, or those whose constitutions have been shattered by disease that are troubled with "nervousness" and if no precautions are taken, it is reasonable to expect that such persons will suffer most at childbirth.

Having briefly considered the most important causes of pain in the subsequent chapters we shall endeavor to instruct the reader how to render these causes inoperative, and to remove the parturient female from their influence.

CHAPTER V.

HYGIENIC MANAGEMENT.

The object of Hygiene is to secure the most perfect health possible, and prevent sickness. To this end it may be necessary to place certain restrictions upon our customary habits. We say restrictions, because many of the habits we may have developed by artificial modes of life, are apt to be inconsistent with perfect physical development.

The special object in introducing the subject here is to secure for the mother the most perfect physical standard, and at the same time endow her unborn child with a perfect constitution.

The pregnant woman should avail herself of every possible means to improve her physical health, and avoid every influence that can possibly fret, annoy, distress, or in any way injure her.

The husband and those who habitually must asso-

ciate with her should endeavor to preserve the tranquility of her mind, remove all sources of anxiety, relieve all annoyances, and by every possible means contribute to her vigor, cheerfulness, and happiness. Her associations should be of the most cheerful, pleasant, graceful, and happy character; such as remove her mind from gloomy forebodings, anxiety, fear, and selfishness. She should never be surrounded with any imperfections nor be annoyed with the contemplation of misery, deformity, or unhappiness. She should never be compelled to hear stories of horror, which Dame Grundy so much delights to tell.

Before important surgical operations are performed more or less time is generally spent in putting the patient in the most perfect physical condition possible, that the system may be the better enabled to bear the shock of the operation, a change that will result in diminishing pain and danger and hasten recovery. If physical perfection is a matter of so much consequence under such circumstances, how much more importance it is when the welfare of two beings is at stake.

If conception occur while the woman is nursing another child, it should be weaned at once, for her physical forces will rarely if ever enable her to maintain both without impairing their vitality, and injuring herself.

The pregnant woman should not lead a life of indolence, nor should she on the other hand indulge in prolonged or violent exercise. Much must depend upon the natural vigor she possesses.

Owing to the extreme liability of some women to miscarriage they will find it necessary to avoid motion almost entirely. This no doubt proceeds from some

local weakness or irritability that is aggravated by motion. Fortunately such cases are rare, and the best treatment is quiet, with passive motion. This condition frequently disappears after a certain period of gestation has been reached.

With this rare exception, exercise is always beneficial if moderately indulged, and is most beneficial when carried on in the open air, but should never under any circumstances be so active or long continued as to induce fatigue. Probably walking is the best form of exercise that can be taken, although when the pregnancy is far advanced it may become so difficult and painful that it may be omitted. When for any reason walking is not advisable, riding in an easy carriage may be substituted. No matter whether she is to walk or ride care should be taken that it is agreeable and pleasant. There should be some agreeable, animating object in view. The woman must not be made to realize that the walk or ride is a forced routine. The mind as well as the muscles must be diverted, else the exercise becomes monotonous and tiresome, a damage instead of a benefit. The same road or path should not be selected each day, the mind is to be occupied by new attractions, a variation of scenery. The exercise should be frequently repeated and not too long continued, and should be carried on in the open air, in the sunshine. A gently active life is best calculated to preserve the health of the mother and her unborn child. The object is to increase and conserve the physical forces—to invigorate. Violent or prolonged exercise is to be avoided. Running, dancing, rowing, lifting, carrying heavy weights, as well as riding in uncomfortable, or uneasy carriages, over rough roads, or upon horse back, is

objectionable. Railway travel is unwise, the continuous jar of the cars being equally as dangerous as violent jolting.

The more nearly delivery approaches the more repose and quiet may be indulged. The use of the sewing machine is to be refrained from.

Pure air and plenty of it is the rule, and not only should the exercise be taken out of doors as much as possible, but the air of the rooms she occupies is to be as free from impurities. The air is to be frequently changed, and is best done when the room is unoccupied. Give the rooms frequent airings and avoid extremes of heat and cold. Perfect ventilation does not imply that the room is to be *turned out doors*, or the temperature reduced to the freezing point. A small opening at the top and bottom of the room will secure a constant change of air—a constant admission of oxygen, and escape of carbonic acid gas, and yet the temperature may be maintained at an agreeable pitch all the time. It is a mistaken notion that cold air only is pure. The apartments do not want to be dark. Let in the rays of the sun, receive their vivifying influence. Plants will not thrive in the dark, and neither mother nor child can flourish without sunlight. Sun baths are decidedly beneficial; sit in the sun half an hour or more daily. Feeble women will find it an agreeable tonic.

By exercising in the forenoon we get the use of the best physical strength, and at a time when every organ is in the best condition to profit by it. At this time of day we are most apt to have sunshine, and the air is purest and most exhilarating.

Bathing is beneficial when properly employed, but extremes must be avoided, there is no sense in *soak-*

ing a person to death on the one hand, nor completely obstructing the pores of the skin with dirt on the other. The temperature of the bath, the time of its employment, and the object to be attained must always be considered.

It is folly to suppose the same kind of bathing will answer every purpose, for bathing implies something more than mere cleanliness, the temperature materially influences the result, and while one woman may be greatly benefitted by a cold bath another will be injured by it. Those who have an abundance of vitality will find the cool, or even cold bath, beneficial and agreeable, while those of a feeble constitution may be so chilled and injured by it that reaction failing to occur serious internal congestions, and even fatal consequences may follow.

As a rule bathing should be agreeably tempered to suit, varying from cold to hot, partial or complete, plunge, tub, sponge, douche, or sitz, etc. Probably the temperate or tepid bath will be suitable for the greatest number. Immediately after emerging from it the body should be rubbed thoroughly dry with a coarse towel, that proper reaction be induced. Usually the bath may be continued from three to ten minutes and the lower the temperature the shorter duration.

Cool baths are most beneficially employed in the fore part of the day, the object being mainly to secure its invigorating effect, while the warm bath on account of its soothing, calming influence is most beneficial in the latter part of the day or evening.

Women who have previously been in the habit of cold plunge or shower baths, should not discontinue them now, but if they have never accustomed themselves to them it is doubtful if it is best to begin them

while in this condition lest the shock they occasion cause miscarriage.

The temperature of the different kinds of baths varies considerably as will be seen from table:

Cold bath,	30° to 60° Fahr.
Cool "	60° to 75° "
Tem. "	75° to 85° "
Tepid "	85° to 92° "
Warm "	92° to 98° "
Hot "	98° to 110 "

Nervous women will find a warm bath taken just before retiring will allay irritability, nervousness, and induce agreeable sleep. It moderates pain and soothes the entire system, and if not continued too long will not debilitate, but rather invigorate. Bathing should not usually be indulged in while digestion is going on.

Baths may be medicated or not as desired. For the purpose of cleanliness the tepid sponge bath is most available—though the sponge employed briskly in the morning, moderately cool, and followed immediately by a brisk rubbing is to be commended, and those who have not the facilities for immersing the whole body will find it an excellent way to apply the tepid or warm bath at night.

With reference to the employment of the sitz bath we cannot do better than quote from the well known author Dr. Shew:

"Pregnant women receive much benefit from a constant use of this bath. A small tub of sufficient size, set upon a very low stool, or anything by which it can be raised a few inches, is quite sufficient. Unpainted wood is the best material, metal being unpleasant and cold. The water is used from one to five or six inches deep. The length of time this bath

is used varies from a few minutes to two hours or more. To avoid exposure to cold, it is best to uncover only the part of the person to be exposed to the water. This bath has the effect of strengthening the nerves, of drawing the blood and humours from the head, chest, and abdomen, and of relieving pain and flatulence, and is of the utmost value to those of sedentary habits. It is sometimes well to take a foot bath, tepid or cold, at the same time. If a large quantity of cold water were used in this bath, it would remain cold too long, and thus drive the blood to the head and upper part of the body, which might be very injurious; but the small quantity of water used at once becomes warm, and thus admits of speedy reaction. In some local diseases of the lower parts, when there is inflammation, and the cold water feels most agreeable, the water is frequently changed. If there is any inclination to headache, or too much heat in the head, a cold bandage upon the forehead and temples is good. It is often well to rub the abdomen briskly during this bath. The sitz bath may be used by any person, whether in health or otherwise without the slightest fear of taking cold. Let those subject to giddiness, headaches, or congestions of blood in the upper regions try this and they will at once perceive its utility. In those troublesome itchings which often afflict pregnant women, this application may be made as often as the symptoms occur and will be found a sovereign remedy."

It is not desirable that any shock should be given the system, and the temperature at which the bath is begun should usually be about that of the tepid bath. It can be employed at any time of day, and is agree-

able in the evening when the warm general bath is not being used.

Plenty refreshing sleep is essential to the welfare of both mother and child. At least eight hours is advisable. It favors the tranquility of both mind and body, and not only relieves the uneasiness and inconvenience sometimes attending this condition, but is a potent preventive of habitual miscarriage. The sleeping room should be quiet and airy, neither too warm nor too cold, the bed moderately hard, the covering light but sufficient to prevent chilliness; matresses are to be preferred, and feathers prohibited. Occasionally a nap during the day is admissible, and frequent rests desirable, but in resting it is not best to sit on cushions for by the warmth of the body they occasion, they induce congestion of the pelvis, a condition particularly to be prevented.

The dress should be loose and comfortable, and so arranged that unequal pressure is avoided. It should be suspended from the shoulders instead of the waist and hips. Stays and corsets if worn at all must be loose enough to admit of perfect freedom of the abdominal muscles and after the fifth month had better be laid aside. Any attempt to conceal her condition, by lacing, stays or tight dresses, cannot be too severely condemned, and will be certain to be followed by bad results, which in many instances will not admit of a remedy. The Spartan law directed that pregnant women should wear large dresses, so as not to prejudice the free development of the precious charges of which nature had rendered them the momentary depositories. Care should be taken that the breasts are not pressed upon nor injured in any way. Flannel underclothing is always best, unless in the few excep-

tional cases where the skin is exceedingly sensitive. In no case should tight garters, if indeed any, be worn, on account of their tending to obstruct the circulation and cause cold feet and the knotted condition of veins, that give so much trouble subsequently.

The sexual relations at this time should be of the most moderate character, for it certainly will, if freely indulged, exhaust the mother, and impair the vitality of the child, inducing in its constitution precocious sexual development. The mind should be free from the subject, and every circumstance that has a tendency to promote desire should be studiously avoided. For this reason separate beds and even sleeping rooms for both husband and wife are to be recommended. On the other hand ungratified desires, where so great as to gain control of the mind, are liable to mark the foetus with an insatiable appetite. It is for this reason we counsel moderation and believe the moderate gratification of any appetite, when consistent with reason is better than absolute denial.

Temperance is the best conservator of health and pleasure. "Just in proportion as the mother observes the laws of health so will the labor be short or protracted, hard or easy. Just as life is natural, labor is natural, and a natural labor is not painful or dangerous. The organic nerves which supply the uterus are never sensitive in a healthy state. It is only in disease that they have pain. All the pain, difficulty and danger of childbirth is the result of disease. Banish disease and we rid ourselves of its consequences."

CHAPTER VI.

DIETETIC MEASURES.

Since the composition of different kinds of food has been determined by chemical analysis, the influence of diet upon physical conditions is capable of comprehension, and there no longer remains any doubt of the importance of a well selected diet in pregnancy. It has proved that at least some of the unpleasant phenomena attending this condition can be overcome or avoided by a properly regulated diet.

We have already had occasion to allude to the influence bony development of the *fœtus* exerts upon the ease or difficulty of childbirth, and it is now appropriate that we consider the relation of diet to bony or osseous development. It is well known to physiologists that the various structures of the body are elaborated from the materials supplied by the food, and that if certain nutritive elements are deficient those structures into the composition of which they enter must necessarily be defective.

Bones are composed very largely of calcareous or

earthy matters, and the process of ossification is not completed in all the bones until the individual has reached adult life.

In the early stages of fetal life, what afterwards becomes bone is in a state closely resembling gristle, and it is not until several months have elapsed that the deposit of earthy matters take place in this gristly substance, but so rapidly does it then take place that at birth some of the bones have acquired considerable hardness, and thus preserve form and shape of the child. This bony development therefore, we desire to retard in order to render the birth easy, and as the earthy substances that form bone, as well as the materials that compose the other structures of the child must necessarily be derived from the blood of the mother, and her blood in its turn be supplied by her food, the question naturally presents itself, why cannot the food of the mother be selected so that there shall be a sufficiency of all the nutrient materials except that which occasions the hardening of bones ?

So far as we know this subject was first brought to public notice by an English chemist by the name of Rowbotham by the publication of a small pamphlet in 1841. This pamphlet is now out of print but the principles it contained have been made the central idea of a treatise entitled *Parturition Without Pain* by M. L. Holbrook, M. D. to which very valuable little work I am greatly indebted for many important suggestions.

Mr. Rowbothams idea originated from reading the physiology of the development of the fetus, from which he reasoned that the calcareous substances being deposited from the mother's blood, a diet deficient in this element would materially affect the character

of the birth. His wife having suffered severely in two previous births he determined to try the experiment of a restricted diet, with the hope of relieving her suffering, and the result being so satisfactory that he made it public in the pamphlet referred to above.

"She had on this occasion, two years and a half after the last delivery, advanced full seven months in pregnancy before she commenced the experiment, at her husband's earnest instance; her legs and feet were, as before considerably swelled ; the veins distended and knotty and her health diminishing.

"She began the experiment in the first week of January, 1841. She commenced by eating an apple and an orange the first thing in the morning and again at night. This was continued for about four days, when she took just before breakfast, in addition to the apple and orange, the juice of a lemon mixed with sugar, and at breakfast two or three roasted apples, taking a small quantity of her usual food, viz : wheaten bread and butter. During the forenoon she took an orange or two and an apple. For dinner she took fish and flesh in small quantity, and potatoes, greens and apples, the apples sometimes peeled and cut into pieces, sometimes boiled whole, along with potatoes, sometimes roasted before the fire and afterwards mixed with sugar. In the afternoon she sucked an orange or ate an apple or some grapes, and always took some lemon juice mixed with sugar or treacle. At first the fruits acted strongly on the stomach and intestines but this soon ceased, and she could take several lemons without inconvenience. For supper she had again roasted apples or a few oranges and rice, or sago boiled in milk ; sometimes the apples peeled and cored were boiled along with the rice and

sago. On several occasions she took for supper apples and raisins, or figs with an orange cut among them and all stewed together. Two or three times a week she took a teaspoonful of a mixture made of the juice of two oranges, one lemon, half a pound of grapes, and a quarter of a pound of sugar or treacle. The sugar or treacle served mainly to cover the taste of the acids, but all saccharine matters are very nutritious. The object of giving these was to dissolve as much as possible the earthy or bony matter she had taken with her food during the first seven months of her pregnancy.

"She continued in this course for six weeks, when to her surprise and satisfaction, the swelled and prominent state of her veins, which had existed before she began, had entirely subsided ; her legs and feet which were also swelled considerably, had returned to their former state, and she became so light and active she could run up and down a flight of more than twenty stairs with more ease than usual when she was perfectly well. Her health became unwontedly excellent and scarcely an ache or a pain affected her up to the night of her delivery. Even her breasts, which at the time she commenced the experiment, as well as during her former pregnancies, were sore and tender, became entirely free from pain, and remained in the very best condition after her delivery, and during her nursing

"At nine o'clock on the evening of March 3d, after having cleaned her apartments, she was in the adjoining yard shaking her own carpets, which she did with as much ease as any one else could have done. At half past ten she said she believed her time was come and the accoucheur was sent for. At one o'clock the surgeon had left the room. He knew nothing of the

experiments being made, but on being asked, on paper, by the husband, two days afterward, if he ‘could pronounce it as easy and safe a delivery as he generally met with,’ replied, on paper, ‘I hereby testify that I attended Mrs. Rowbotham on the third instant, and that she had a safe labor, and more easy than I generally meet with.’ On his asking the female mid-wife if she thought it as easy as usual replied, ‘Why ! I should say that a more easy labor I never witnessed, I never saw such a thing, and I have seen a great many labors in my time.’

“The child, a boy, was finely proportioned and exceedingly soft, *his bones were all in gristle*, but he became of large size and very graceful, athletic, and strong as he grew up. The diet of his mother was changed on his birth, and she ate bread and milk and all articles of food in which phosphate of lime is found, and which had been left out before. She also got up from her confinement immediately and well. After her last delivery, in July, 1838, full ten days elapsed before she could leave her bed, and then she swooned at the first attempt ; on this occasion, March, 1841, she left her bed on the fourth day, and not only washed but partly dressed herself. Had she not been influenced by custom and somewhat timid, she might have done so sooner. To be assisted appeared like a burlesque to her, not to say annoyance. She had no assistance from medicine. In the former pregnancy she had subsisted very much on bread, puddings, pies and all kinds of pastry, having an idea that solid food of this kind was necessary to support and nourish the *fœtus*, and it is quite right to suppose that nutritious food is necessary for this purpose ; but nutritious food can be had without that hard and bony matter, which

is so large an ingredient in wheaten flour. For instance, the West India grains, sago, tapioca, rice, etc., have little of it; and Mr. Rowbotham, made a table of substances, with the proportion of phosphate of lime in each, so that it may be avoided in the food during pregnancy, and used afterwards in nursing when the bones and teeth are made. Wheat contains most earthy matter.

"Beans, rye, oats, barley, *have not so much earthy matter as wheat*. Potatoes and peas not more than *half as much*; flesh of fowls and young animals *one-tenth*; rice, sago, fish, eggs, etc., *still less*; cheese, *one-twentieth*; cabbage, savoy, brocoli, artichokes, coleworts, asparagus, endives, rhubarb, cauliflower, celery, and fresh vegetables generally; turnips, carrots, onions, radishes, garlics, parsley, spinach, small salad, cucumbers, leeks, beets, parsnip, mangel-wurtzel, mushrooms, and all kinds of herbs and flowers average less than *one-fifth*; apples, pears, plums, cherries, strawberries, gooseberries, raspberries, cranberries, blackberries, huckleberries, currants, melons, olives, peaches, apricots, pineapples, nectarines, pomegranates, dates, prunes, raisins, figs, lemons, limes, oranges, and grapes, on an average are *two hundred times less ossifying* than bread or anything else prepared of wheaten flour."

With such an extensive list of non-ossifying edibles to select a dietary from, and the culinary ingenuity of most women, it does not seem that the appetite for preparations of wheat would be very difficult to appease. A varied diet is absolutely essential to health, and an occasional meal of which wheat bread forms a part may be permitted, more particularly in the early months of gestation, but in the three latter

when ossification is going on, the more carefully the diet is selected to exclude phosphate of lime, the better.

There is no danger of injury to the mother or child by this dietetic course, for it is impossible to exclude all calcareous matter, yet the quantity can be so diminished as to *retard* instead of *favor* ossification. The list as quoted above may not be absolutely correct, yet as the fruits that are most advised contain so much acid, that they probably hold the calcareous matters in solution and prevent their deposition, consequently the list is practical and the results satisfactory.

As regards drinks, in many sections the water contains in solution considerable quantities of lime, the water is hard, consequently rain or snow waters are best. Boiling such hard water before using will cause the precipitation of considerable of the lime as may be observed by the formation of the crusts in the tea-kettle. When it is necessary to use hard water it should be boiled and cooled before using for cooking, or drinking. Tea and coffee may be moderately indulged in, and of the two tea is least objectionable. Cocoa, contains less lime than coffee, though coffee is a good nutriment with this one exception. Lemonade, or drinks made of acid fruits, jellies, etc., are unobjectionable and the acids they contain will to a certain extent hold the earthy or calcareous bony matters in solution and oppose their deposition.

Women living upon the foregoing diet will have little desire for much drink of any kind. Swelling of the feet and limbs rarely occur when the fruit diet is employed and cases suffering from such difficulty

when the diet is begun will generally experience decided relief.

There has been no objection offered to animal food. Indeed, we would advise that it form a small portion of the diet, particularly in debilitated and feeble women, but in those of full habit it had better be sparingly eaten as it is heating, while the acid fruits are cooling. Lamb, veal, chicken, and fish are the most appropriate meats for this condition.

Inordinate and capricious appetites for improper and noxious articles should of course be opposed, but when the longings can safely and properly be indulged, it should be gratified. With the diet list advised, very little if any annoyance on this score is to be apprehended.

The benefits to be secured by a well regulated diet are not merely hypothetical, but have been fully substantiated by experiment. Soon after the publication of the pamphlet referred to, an English lady of high respectability resolved to profit by the idea and as soon as she thought she was pregnant she abandoned bread, potatoes, and milk, and subsisted on the West Indian grains, rice, tapioca, and sago, fruit of all kinds, and vegetables, and when she ate meat she ate that which was young, drank lemonade, and tea, both of which were made of distilled water. She did not suffer an hour's inconvenience during the whole time, the birth was easy, and the child though very soft at first grew rapidly and became large and strong.

Numerous others have tried it that we know of and have been reported by others, and not a few have come under our own observation, in all of which results are mainly the same. Several have tried the plan at my

suggestion and the results have in every instance been highly satisfactory.

Those nations among whom childbirth is comparatively easy subsist mainly on a diet in which bony materials are very limited. Females of tropical climates where the diet is very largely fruit, suffer very little at childbirth. The American Indians eat very little wheat, and the same is true of the colored slaves of the South.

It is a very popular but erroneous idea that the mother must gorge herself throughout pregnancy in order to support and nourish the unborn—that she must “eat for two.” This is a very great mistake, on the contrary instead of eating more than she wants, she should be governed by the dictates of hunger, and never eat an extra mouthful. The amount of nourishment the foetus requires day by day is very trifling indeed. As a result of such a mistaken notion, she disorders the stomach, becomes heated, and feverish, is troubled with headache and dizziness, and lays herself liable to numerous intestinal disorders, and if assimilation is active in proportion to the increased amount eaten, she becomes extremely fleshy and uncomfortable, and will be liable to much annoyance of the extremities.

Figure the matter out for ourselves, the average duration of pregnancy is two hundred and eighty days; the average weight of the child and placenta (*afterbirth*) does not exceed ten pounds, and generally not over eight. Then ten pounds gives one hundred and sixty ounces, or but little more than half an ounce a day is required.

Admitting that during the first four months the amount required will be much less than in the last

four, as we more nearly approach delivery the greater will the amount required become, nevertheless the average remains the same; but laying the question of average aside, there is no use of the mother commencing to lay in a surplus for at least the first six months, though during the last three the amount of nourishment might be slightly increased. She should also bear in mind that if by excessive eating she increases the nutrition of her child, she increases its growth, and for every ounce she increases its development beyond a given point, she unwiseley diminishes the ease of delivery.

Numerous authorities might be cited on the subject, but we do not regard them necessary, the proposition is of too easy comprehension to require argument, and unless morbid conditions supervene to require a modification of the amount eaten, for therapeutic purposes, the dictates of hunger will be by far the best guide how much will be best, always bearing in mind let moderation in all things prevail.

CHAPTER VII.

REMEDIAL TREATMENT.

Although the measures already advised are of the utmost importance, and will certainly exert a powerful influence over the ease and safety of delivery, the mother's recovery and the future welfare of the child, there remains to be considered other agencies, in the efficacy of which we have almost unlimited confidence—agencies which exercise a positive curative influence over those abnormal conditions that so frequently attend, or coexist with pregnancy, and which so often complicate and increase its difficulties.

These agencies—therapeutic in character—may be employed in conjunction with the hygenic and dietetic measures already detailed, and will act in perfect harmony with them, and mutually increase the value of each other.

We have seen the dietetic and hygenic measures employed alone, with the most decided benefit, and have in other cases tried the therapeutic treatment, we are about to advise—when the other could not be made

available—with the effect of rendering the labor short, easy and safe, as well as of controlling any unpleasant symptoms that presented during the progress of the pregnancy.

All women are not affected in the same manner—all constitutions are not alike—and we will often observe during pregnancy, pathological conditions, which had their origin long before conception occurred, or pathological conditions may be developed during gestation. Such conditions may not depend for their present existence, or be in any way connected with pregnancy, yet if allowed to proceed, will seriously militate against a short, easy, or safe delivery. Again these morbid conditions may have an intimate connection with the gestation, or pregnant state. The present and future welfare of both mother and child necessarily depend greatly upon our ability to control or remove these conditions.

At the risk of seeming inconsistent, or of appearing to lack confidence in what I have already written and advised in the preceding chapters, I shall consider those remedial agents which have in my hands and in the hands of my professional acquaintances, accomplished so much for the relief of suffering woman.

There is a tradition that the Indian woman of this country, for two or three months prior to delivery resort to drinking an infusion of a plant known as *squaw vine, or partridge berry*, in order to render their delivery easy and safe. Whether this tradition has any foundation in fact, or not, I do not know, nor does it seem that I need care, so long as the tradition has developed a knowledge of a remedy of the greatest possible consequence to the parturient female. Whether the squaws drink it or not, there is nothing more

certain to my mind than that it does possess the truly wonderful and beneficent properties ascribed to it.

In the *American Dispensatory*, by Dr. John King, we find the following reference to it: "It is said that the squaws drink a decoction of the plant for several weeks previous to their confinement, for the purpose of rendering parturition safe and easy. * * *

"Partridgeberry is parturient, diuretic, and astringent, Used in dropsy, suppression of urine, and diarrhoea. It seems to have a special affinity for the uterus, and is highly beneficial in all uterine diseases. It appears to exert a powerful tonic and alterative influence on the uterus. Dose of the strong decoction, from two to four fluid ounces, two or three times a day. The berries are a popular remedy for diarrhoea and dysuria. It is highly recommended as a remedy for sore nipples, used as follows: Take two ounces of the herb, fresh if possible, and make a strong decoction with a pint of water, then strain and add as much good cream as there is liquid of the decoction, boil the whole to the consistency of a soft salve, and when cool anoint the nipples with it every time the child is removed from the breast."

Hale in his *New Remedies* says: "I would recommend it for *false pains, uterine irritability, scanty and delaying menses, dysuria and scanty urine with profuse sediment.*

In procuring this remedy, it is best to obtain it by its botanical name, MITCHELLA REPENS as there are several plants known in different parts of the country by the name of squaw vine, squaw berry, squaw mint, partridge berry, and other similar names, which would have a tendency to confuse any one not familiar with botany, and it is necessary to get the right plant.

An infusion is always the best form for administration, and will be found most efficacious, for I must confess though I have tried several specimens of fluid extracts, they have failed to afford the satisfaction I have derived from the infusion of the recently gathered plant. It is advisable not to rely on the plant that has been gathered more than a year as it is apt to lose its strength and become inert if kept longer.

The action of this remedy either alone or in combination, is to act gently upon the kidneys and urinary organs, relieving irritability, and moderately increasing the flow of urine. It cleanses the blood, soothes any nervous excitement that may exist, removes pain, and soreness, and effectually overcomes any morbid inflammatory conditions of the female reproductive organs, strengthens the uterus and establishes such a healthy condition as results in an easy and safe delivery.

When the lower extremities are swollen, as is often the case after the pregnancy is well advanced owing to an obstruction of the circulation, I have seen this remedy produce the most decided and speedy relief. I have given it in the treatment of uterine disorders, but as the space of this work forbids a consideration of uterine diseases I must defer a description of them for the future.

There is another plant that possesses a similar and deserved reputation, and I have frequently combined them with the happiest results, I allude to Blue Cohosh, the botanical name of it is *Caulophyllum Thalictroides*, also known as squaw root, of which Dr. Hale in his recent popular work on *New Remedies*, says: "The aborigines and early settlers claimed for it the

power of preventing *tedious and painful labors*. This testimony has been substantiated by many prominent and trustworthy physicians of the eclectic school, as well as of the homœopathic. A few of our school have denied it such power, but the weight of evidence is against them. Dr. A. E. Small is sure from the observation of many years, that it actually prevents the unusual sufferings which many women undergo. He also testifies to the singular fact that many women who have taken it for such purposes have over run their time to the extent in some cases of ten or twelve days. The cases referred to however, all had very easy labors, and a good recovery.

"My experience has been so uniform and conclusive on this point, that I do not hesitate to assert that it prevents not only a too painful labor, but it prevents those premature labors which are so common among the weakly women of this age"

I have repeatedly used a combination of the two with the most satisfactory results. I obtained the fresh materials and administered them in the form of a sweetened infusion, sometimes adding other agents that seemed specially demanded. In very many instances have I made use of these remedies in cases which had hitherto underwent the most terrible sufferings at parturition, with the effect of enabling the mother to have a very speedy delivery almost absolutely free from pain. In those females who had taken it there was very little of the inconvenience usually experienced in the latter months of gestation, the mother made a wonderfully speedy recovery, and in some instances were entirely relieved of uterine disorders to which they had for several years previously been subject.

While practicing medicine in the central part of the state of New York, so favorable were the results attained by using the foregoing remedies in the form of the sweetened infusion I then prepared, and the remedy acquired such a reputation, and very many parturient women procured it that they might go through childbirth without pain, and though it was taken in hundreds of cases where I could not attend the confinement, I have never known of a single instance of failure, but on the contrary received many testimonials of its efficacy, and thanks for the benefits derived from it. There are many women who will remember taking what I then termed the "mother's cordial," the composition of which I did not reveal to them, but which consisted mainly of an infusion of the squaw vine and blue cohosh, preserved with sufficient sugar and alcohol to render it palatable and secure its preservation while being used.

In using an infusion of these plants, an ounce of the *squaw vine*, and half an ounce of *blue cohosh* should be steeped in a pint of water and the whole taken in the course of three or four days. When either is used alone, a greater quantity should be employed.

There is still an other plant that is indigenous to this country which enjoys a growing reputation, not only for the relief of those morbid conditions that render gestation and delivery painful and tedious, but as a remedy to expedite delivery. I refer to the *black cohosh* or *Cimicifuga Racemosa*, also known as *macrotys*. Given in small doses for two or three weeks, there can be little doubt that it has the power of rendering the labor very short and easy. Dr. Scudder of Cincinnati, editor of the *Eclectic Medical Journal*, speaks positively on the subject as follows: "Pregnancy is a physiolo-

gical condition and there should be little or no pain, ache, or unpleasantness associated with it. If there is it should be looked after at once and removed. These unpleasantnesses can be relieved and should be relieved, for the comfort of the mother and more especially because this will probably render the labor easier, and the getting up better. Let me again call attention to *macrotys* as a *partus preparator*, though doubtless most of our readers have tested it. If there are pains and aches in the region of the uterus, tenderness on pressure, or soreness at any part of the uterine globe, if the movements of the child are painful, or there is pain in the pelvic articulations, or, finally, if during the last month there is false pains, *macrotys* is likely to be a remedy. I have used it time and again in these cases with relief, and in others during the last six or eight weeks of gestation, simply to facilitate, and make the labor easier, and I am satisfied, with good results."

In "Hale's *New Remedies*," the author makes the following allusion to it: "*Dystocia*, (difficult labor), is one of those abnormal conditions which come under the domain of homœopathic medication. It is useless to cling to the antiquated superstition that a woman must suffer 'pangs of childbirth.' *Dystocia* is always the result of an abnormal condition of the tissues concerned in the functions of childbearing. * * * I have attended many woman whose previous labors had been exceedingly painful, almost unendurable without ether, but, owing to the administration of *cimicifuga* during the last weeks of pregnancy, they suffer very little. So many of these cases have occurred in my practice, and in that of my colleagues, that it is not proper to affect skepticism or disbelief. As a rule, first labors are painful and protracted, while subse-

quent ones are less so ; but if five or six are very painful, and each one seems to be more painful than the last, we cannot expect the seventh to be painless, except from some remedial interference. Now, in such cases, cimicifuga, caulophyllum or viburnum is given, and woman's next labor is easy, what are we to think? Evidently, that the medicine effected a change of condition from abnormal to normal.

"In such cases give the cimicifuga at least two weeks previous to the expected date of labor, in doses of one to ten drops, two or three times a day ; the doses repeated oftener as the date approaches."

The preparation alluded to by Prof Hale, is the homœopathic mother tincture, and when it can be obtained, will represent very certainly, the virtues of the drug. An infusion of the root, one-half ounce in a pint of boiling water, of which the dose may vary from a teaspoon to a tablespoonful, repeated three or four times a day, will also answer. The fluid extract when reliable, in doses of from three to eight drops may be used.

Were I going to use it, without having used either of the other remedies, I would advise that its employment be given earlier, say at least two months before delivery.

If too much is taken it will produce an unpleasant fullness in the head.

OTHER FUNCTIONS REQUIRING ATTENTION.

The condition of the BOWELS must be looked after and any disposition to constipation overcome. If the woman is of a full habit and costive I would advise a small quantity of Epsom salts daily, just enough at a dose to produce a free and natural evacuation. They cool the system, relieve determination of blood to the

head, with dizziness, swelling of the feet, etc., prevent nausea, and a host of the disorders that attend constipation. We are well aware the taste of salts renders them objectionable to very many. When such is the case they may be disguised and their value enhanced by dissolving them in hard cider in the proportion of half a pound of the salts, to a gallon of old cider, of which the dose will be two to four ounces once or twice a day, the object being to maintain a natural condition, the dose must necessarily be varied accordingly.

Other salines may be used in their stead as Rochelle salts, seidlitz powders, citrate of magnesia, crab orchard salts, etc., in quantities sufficient to regulate the bowels.

It so happens that women who are not plethoric are often troubled with constipation, indeed constipation is a very common condition, and is often a source of very great trouble. A Dr. Thompson, of Mississippi, author of a domestic practice recommends a prescription which he calls his "compound syrup of butternut or Anodyne Alterant," composed as follows:

Take extract Hyoscyamus $\frac{1}{2}$ ounce.
" Butternut $1\frac{3}{4}$ "
" Bi-Carbonate Soda $\frac{1}{2}$ ounce.
Oil Sassafrass, 20 drops.
Simple Syrup, 1 pint.

Mix all together, and the dose will be from one tea-spoonful to a tablespoonful once or twice a day. He claims to have given it through pregnancy in women who had previously endured very severe labors on account of bearing very large children with the effect

** Although Dr. Thompson does not specify what form of extract he means it is presumed he intends fluid extracts, as the solid extracts, in such proportions would be too great for the dose advised.

of contributing very greatly to the health of the mother, and by causing her to bear small children, securing easy and safe deliveries. We have never tried it under such circumstances, but know it to be an excellent medicine in the constipation associated with piles.

The syrup of buckthorn sold in nearly all drug-stores, is a very agreeable laxative, very much in use.

Since its introduction into general use, the *Cascara Sagrada* has become deservedly popular, and we prescribe it with the fullest confidence that it will effectually relieve any case of constipation whether occurring during pregnancy or at any other time. The formula I have found most satisfactory is,

Take Fluid Extract Cascara Sagrado, 1 ounce.

Tincture of Nux Vomica, 1 dram.

Simple Syrup, 3 ounces.

Mix and take a teaspoonful two or three times a day. This may be flavored with anything that is preferred. Those who object to the nux vomica may omit it. Teaspoonful doses of the fluid extract of Wahoo, or *Euonymus Atropurpureus* in syrup, one to three times a day, answers admirably.

The condition of the KIDNEYS must always be remembered, and any irregularity corrected. When the kidneys are not kept sufficiently active the general health suffers and if this condition occurs about the time of delivery renders convulsions liable. Inactivity of the kidneys is sometimes the cause of the swelling and dropsical condition of the lower extremities, though such a condition is usually due to pressure of the enlarged uterus upon the returning current of blood through the veins into general circulation. The diet we have recommended will usually keep

both bowels and kidneys in a normal condition, and the squaw vine being diruetic is generally all that will be needed, but should the urine become scanty, the following may be relied upon, and will restore the kidneys to a healthy condition:

Take Acetate of Potash, 1 dram.
Fluid Extract Dwarf Elder, 2 drams.
Sweet Spirit of Nitre, 3 drams.
Essence Wintergreen, $\frac{1}{4}$ dram.
Water to make 2 ounces.

Mix. Dose, a teaspoonful in water, three to six times a day. It will, if previous instructions are obeyed, be very rare that this prescription will be rendered necessary.

There is a peculiar action going on in the uterus during the evolution of a new being, and some functions may not readily adapt themselves to the new order of things, and the woman is liable to a series of inconveniences, which, while they cannot be said to constitute a real disease, are very annoying and sometimes are aggravated to such an extent as to endanger her welfare. Even were such not the case, the annoyance they occasion demands our endeavors for their prevention and relief.

Although the instructions already given will be found adequate in most cases, it so happens that sometimes remedial aid is necessary, and at the expense of becoming tedious, I will venture to detail the treatment I have found most successful, though we desire it ever borne in mind that hygienic influences are of the very greatest importance. Usually many of the annoyances or ailments of pregnancy, are due to causes of remote origin that have continued to the present, and impairing the vital forces, and more less

seriously deranging those functional performances that constitute the phenomena of life.

MORNING SICKNESS.

This is usually an early symptom of pregnancy, and is usually the most annoying during the early months, generally ceasing entirely after the quickening. It often occurs immediately that conception has taken place, and is by many regarded as a very important, and certain symptom of pregnancy. In some cases it disappears after the first few weeks to reappear again during the last weeks, when it is no doubt due to the pressure upon the stomach of the enlarged uterus. When it occurs near the end of a pregnancy it usually takes place after eating. In the early stage of gestation, though the nausea and vomiting may occur at any hour of the day, it most often occurs in the morning, and after it has subsided, is often absent until the next day.

This unpleasant condition is rarely attended with much danger, though the annoyance is great, and it is generally presumed that it is propagated through the sympathetic nerves to the stomach from the uterus. A no less authority than the celebrated C'aseaux claims that it depends upon some morbid condition of the uterus, as inflammation or ulceration, but that it is rarely fatal. It is sometimes so severe as to cause extreme emaciation by interfering with nutrition and sometimes endangers miscarriage.

Singular as it may seem, well authenticated cases have occurred in which the husband experienced the morning sickness instead of the wife, a phenomena only to be accounted for by the unexplained and perhaps unexplainable mystery of "sympathy" propagated through the sexual contact. Some authorities

have claimed that when nausea does not occur, miscarriage is liable, or if the full term is completed, a difficult labor will be experienced, a claim in which I certainly cannot concur. While practicing in Saratoga County, N. Y., a case came under my observation in which the husband was so afflicted with nausea and vomiting that he was the butt of many a good natured joke. His wife did not experience the slightest inconvenience during her "term," her labor was of but two or three hours duration, easy, and she made a good recovery. In three successive instances was this phenomenon repeated.

Much good may be anticipated from the dietetic and hygienic advice already given, for among those who have tried it the absence of this annoyance was particularly noted. I am led to believe that the sickness and vomiting of pregnancy depend more upon those unnatural conditions developed by the impositions of modern social customs, than upon any *natural* relation to reproduction.

The power of the squaw vine and blue cohosh to control irritable conditions of the uterus renders them very effectual remedies in the nausea and vomiting, though their action on the stomach directly is of no consequence. When the sickness and vomiting occurs immediately on getting up, it may be prevented by taking the breakfast while lying quietly in bed. Small pieces of ice slowly dissolved in the mouth and swallowed often have an excellent effect, and so do cold compresses applied over the stomach.

When the vomiting continues through the day, the stomach itself is liable to become diseased and digestion be deranged. It is well to look after the condition of the bowels in such cases.

Bromide of Potassium, by allaying the excitement of the nervous system, will often be found an efficient remedy and may be used as follows:

Take of Bromide Potassium, 2 drams,
" Cinnamon Water, 3 ounces

Dose—a dessert spoonful two or three times a day. This will be the most appropriate in those cases in which there is great headache, or determination of blood to the head.

An injection of Bromide of Potassium into the rectum is sometimes attended with good results when its administration by the stomach cannot be tolerated or is of no value. Thirty to sixty grains dissolved in two or three ounces of liquid starch, thrown up at once and retained is the proper amount. Dr. Meigs frequently advised equal parts of sweetened tincture of rhubarb, and the compound tincture of gentian, to be taken after meals, but this would do little good except there was some primary derangement of the digestion.

Clothes wet in Laudanum, or Chloroform, and laid upon the stomach, are often beneficial.

When the vomiting is not prolonged or the straining not severe, little attention is generally given it, but when it becomes so bad as to endanger miscarriage then the most effectual means are to be employed. The acid fruit diet generally controls the sickness and arrests or prevents the vomiting, and for this purpose lemon juice is often valuable. It may be taken in doses of a tablespoonful, mixed with an equal part of water.

The effervescing solution of Citrate of Potassa or Magnesia is sometimes very efficacious, and acts as a laxative at the same time, and being an agreeable

drink will often be tried before other means are resorted to. It will be in harmony with the principles of the fruit diet.

I have used small doses of *Nux Vomica* when other remedies failed, with good results. Being a nervous stimulant it rouses the nervous system out of the condition in which reflex irritability takes place, and restored the lack of co-ordination that is present in such conditions.

Take of Tincture Nux Vomica, 20 drops,
" Water, 4 ounces.

Dose—a teaspoonful every two or three hours. Carbonated drinks are often valuable, the carbonic acid gas acting as a sedative upon the sentient extremities of the nerves supplying the stomach. It is upon this principle that the French remedy known as the *potion of Riviere* is beneficial, it is as follows:

Take of Citric Acid, 36 grains,
" Simple Syrup, 3 fluid drams,
" BiCarbonate of Potassa, 36 grains,
" Water, 4 ounces.

Dissolve the citric acid in half of the water and add the syrup. Dissolve the potassa in the remainder of the water. The dose is a tablespoonful of each taken one after the other. The union of the acid and alkali in the stomach liberates the carbonic acid gas in the stomach and gets its full action there. It is very agreeable and efficacious. It may be repeated every hour or two if necessary.

Prof. Simpson of Edinburg, recommends the Oxalate of Cerium, or Nitrate of Cerium, and in the hands of some practitioners they have proved effectual agents in doses of three to five grains, frequently repeated, but in their use I have been disappointed.

Iced Champagne will be found excellent in very many cases.

Those of our readers who believe in homeopathic remedies, are recommended to try, Aconite, Nux, Veratrum, Pulsatilla, Cuprum, Bromides, Lobelia, Ipecac, Arsenic.

DEPRAVED APPETITE.

This is also regarded by many as a significant sign of pregnancy. The woman may be seized with a desire for some unnatural substance, and will often eat chalk, magnesia, charcoal, slate-pencil, etc. They often want some article of food which they may have previously disliked, and often such articles will be found acceptable. When it can be done without too great an inconvenience this morbid appetite or "longing" may be gratified, but when it cannot, the woman should dismiss it from her mind. We do not place as much stress upon the gratification of these unnatural appetites and desires as many, yet as they afford a comfort to the mother, we suggest that when practicable they be indulged. A healthy condition of every function will soon do away with them, and to this end we should seek to improve the woman's condition by every possible means, rather than attempt to relieve such desires by special means alone. The course already prescribed, will generally soon overcome longings, and to give her some unexpected article of diet will often break the "longing." If a morbid condition exists in the stomach let it be met with appropriate remedies. Diseases of the stomach not belonging to this treatise must be omitted.

If the appetite fails, let the woman abstain from eating for a meal or so, or if her strength fail on account of it, let the appetite be "coaxed" by some

unexpected delicacy, and small quantities of highly nutritious food be tried. Those who try our Hygienic, Dietetic and Remedial plan will seldom be annoyed by loss of appetite or such morbid conditions—but should they fail, change of climate, scenery, or surroundings, will often work wonders when combined with the treatment laid down under "morning sickness." Should they fail it will be advisable to consult a physician.

FLATULENCE.

This generally comes from a bad state of the digestion and is often associated with colic. In such cases it will be found better to eat a little and often than to eat at long intervals and much at a time. Certain articles of diet will induce an attack, and when they are known should be avoided. Allowing a weak or irritable stomach to go long empty, and then filling it to repletion, will generally provoke an attack of colic if anything will. Avoid indigestible articles of diet, chew the food thoroughly and if remedies are needed, a grain or two of cayenne pepper will often relieve, or ten to fifteen drops of tincture of capsicum and myrrh, (*numbx six*) in sweetened water. They act by increasing the power of natural digestion. A little peppermint or camphor water will generally expel the wind and give relief. An injection to move the bowels will succed. Some of these plans are generally available and can be had on short notice, but as a remedy nothing can excel the following:

Take of Tincture of Colocynth, 15 drops.

" Water, 4 ounces.

Dose—a teaspoonful repeated every fifteen to twenty minutes during the attack, and afterwards to break

up the tendency of the trouble to return, a teaspoonful three or four times a day, for several days.

VARICOSE VEINS.

The veins of the lower extremities often become distended, knotted and painful. They do not often show themselves in the first pregnancy, but are apt to appear later in life and become worse with each successive pregnancy. They are very much aggravated by tight garters, and corsets, neither of which should be worn during this condition. They are caused and aggravated by any circumstance that is capable of impeding the return of venous blood from the extremities.

A free action of the kidneys, skin and bowels have a tendency to relieve them, and I have seen them greatly benefit by the squaw vine compound. Rubbing the extremities towards the body aids in emptying them and is beneficial. A well adjusted laced or elastic stocking is one of the best remedies, and can be obtained from a druggist or surgical instrument maker. A roller bandage, applied from the toes to the body, answers the same purpose, but is difficult to apply so as to make even pressure and admit of freedom of locomotion. An elastic perforated bandage is easily applied and retained in place. When neither of these means are available and the veins are troublesome, the woman should remain in the recumbent position as much as possible, or sit with the feet well elevated.

HEART BURN.

Pregnant women are frequently troubled a good deal by this distressing symptom, for which it is customary to resort to alkalies. They merely neutralize

the acid that is in the stomach, but do not arrest the causes to which it is due. The use of alkalies interfere with the principle of fruit diet, and should be avoided if possible. Heartburn is generally due to an impairment of digestion, and in too many cases to over eating—the food fermenting instead of digesting.

The proper treatment is to avoid it by abstemious living, and if it occurs; fasting, skip a meal occasionally. I have found those remedies that aid digestion to be the most valuable in relieving it. Five to ten grains of *Pepsin* just before or after a meal will often succeed. Charcoal will be found available in many cases and is less objectionable than alkalies. I have found acids among the best remedies. The following is usually a successful prescription:

Take Dilute Nitro-Muriatic Acid, $\frac{1}{2}$ ounce,
" Water, 4 ounces.

Dose—a teaspoonful in a wine glass full of water after eating. It may be greatly aided by diminishing the quantity eaten, and also by avoiding saccharine and starchy food.

PILES.

This distressing complaint is one of the frequent annoyances of gestation and may be caused by prolonged constipation or anything that obstructs the hemorrhoidal veins. Those [women] of a full habit are especially liable to them. Ordinarily the pile tumors are small and are of little consequence beyond the annoyance they occasion, but [when] they are large, painful and become inflamed, they require the services of a physician, for while an operation for their radical cure is seldom justifiable [during pregnancy], every effort to obtain relief is a duty. In treatment

the first point to be looked after is to secure and maintain a moderately open condition of the bowels. This may be secured by the fruit diet, exercise, bathing and injections. In the selection of purgatives it must be borne in mind that only the mildest kind are to be employed. The prescription given on page seventy-nine for compound syrup of butternut is a good one, and I am well satisfied that the butternut has a specific action in this trouble.

Although a very disagreeable medicine, castor oil is a very efficient laxative. Pills containing aloes, podophyllin, calomel and other drastic cathartics must be avoided, for while they have a tendency to aggravate the piles they are liable to produce miscarriage. After each movement of the bowels the parts should be well sponged with cold water, and an ointment of Galls applied, or, what I prefer, a bit of linen or cotton wet in distilled extract of Hamamelis, or Witch Hazel as it is more commonly known. An injection of a few drops of this remedy into the rectum after the bowels have been moved will often accomplish very much in the way of a cure. When properly prepared it is perfectly unirritating. I often have it taken internally at the same time in five to fifteen drop doses two or three times daily, and regard it as one of the best remedies we possess. Piles often disappear entirely after delivery.

CONSTIPATION.

A daily evacuation of the bowels is essential to health, and to neglect for several days together the performance of so important a function is highly prejudicial, and if long continued sooner or later develops a variety of ailments, often of a serious character, among which we may notice feverishness, loss of ap-

petite, indigestion, wakefulness, headache, horrible dreams, sickness of the stomach, bearing down pains, piles, etc.

This troublesome complaint is more easily prevented than cured, though a cure can almost always be effected. Habit has very much to do with its development and cure. The habit of evacuation should be encouraged daily and the best time is in the morning soon after breakfast; the bowels having then been quiet during the night are stimulated to activity by the partaking of food and consequently have a natural tendency to act at this time, and although the desire is felt or not the attempt should be made, and may be aided by an injection of tepid water. The effects of the diet and exercise that has already been recommended is exceedingly beneficial in preventing and curing costiveness. A glass of water drank at night, and another the first thing on rising, and an orange eaten before breakfast, will work wonders. Kneading the abdomen will aid. The use of purgatives are to be avoided for while they will usually unload the bowels at the time, they generally impair their functional activity and after their employment there is usually experienced a greater degree of constipation than before. In the selection of remedies very much is to be considered, and when the case is serious it is best to have competent medical advice, for the reason that there are several varieties of constipation and the remedies that will be efficient in some cases, will be worse than useless in others, and the indiscriminate employment of cathartics will often endanger abortion.

Before the case has become serious we know of no remedy more generally useful than the prescription

for the *Casara Sagrada*, given on page eighty, where this subject was partially considered.

DIARRHCEA.

Looseness of the bowels often occurs as a sequel of constipation, or in alternation with it. Some women are troubled with it more or less the entire term; and others are afflicted with frequent attacks, sometimes coming on without any assignable cause. When it occurs as a sequel of the constipation it is generally of a watery character, secreted by the lining membrane of the bowels, as an effort of nature to discharge the retained waste matter. When not severe it is salutary, and relieves headache, heartburn, nausea, etc., and usually regulates itself when the offending materials are discharged. When, however, it is severe, or prolonged, it should receive proper attention, for then it weakness and predisposes to piles and abortion.

Ordinarily very little medicine need be given, for rest in the recumbent position and a strict diet will be sufficient. If there is griping and pain in the bowels, the tongue furred, feverishness, and the passages filled with mucous, I would advise,

Take Tincture of Aconite Root, 10 Drops,
" Ipecac, In tincture, 10 Drops, (or powder 5 gr.)
" Water, 4 Ounces.

Dose—a teaspoonful every hour or two until relieved.

When there is a good deal of nausea and prostration the following I often find efficient,

Take Fluid Extract of Veratrum, 5 Drops,
" Water, 4 Ounces.

Dose—a teaspoonful every half hour.

If there is a good deal of irritation of the stomach,

Take Tincture of Pulsatilla; 20 Drops,
 " " Aconite, 10 Drops,
 " Water, 4 Ounces.

Dose—a teaspoonful every hour or two.

When the trouble is of a bilious character, I would select,

Take Tincture of Nux Vomica, 5 Drops,
 " " Mandrake, 10 " ai
 " Water. 4 Ounces. ur

Dose—a teaspoonful every two or three hours.

When the diarrhoea is painless, but rather profuse

Take Tincture Cinchona, 1 Dram,
 " Water, 4 Ounces.

Dose—a teaspoonful every three hours.

Whenever the foregoing tinctures can be obtained at a Homœopathic Pharmacy they are to be preferred.

The following mixture will be found equal to almost any case, and has been repeatedly tested by myself and others, and is appropriate to a great variety of cases.

Take Chloroform, 2 Drams,
 " Tinc. Opium, 1 "
 " " Camphor, 2 "
 " " Rheubarb to make 2 ounces.

Dose—one half to one teaspoonful repeated according to the severity of the attack from one to four hours until relieved. It may be preceded or followed by a mild dose of castor oil with advantage.

COUGH.

A troublesome cough sometimes occurs, but unless it becomes so severe as to prevent sleep, or endanger miscarriage by the violent concussion of the abdomen it produces, it seldom requires attention. A tea-

spoonful of paregoric, occasionally repeated, will usually afford relief, but as I do not desire to use opiates when they can be avoided, before resorting to the use of paregoric I would try a teaspoonful of the tincture of either of the following in four ounces of water: Colinsonia, Drosera, or Red Clover, the dose of which, as thus prepared, will be one teaspoonful every two or three hours.

HEADACHE.

A very large proportion of pregnant women are troubled with headache. The causes are numerous. The influence of pregnancy upon the nervous system contributes to the production of headache, by inducing determination of blood, constipation, indigestion, neuralgia, rheumatism and constitutional headache. We can usually do more to cure headache by attention to diet, exercise, and overcoming the causes that occasion it, than by any special remedies addressed to the head. If it persist after the appreciable causes are removed, it will be best to consult a physician. Those who carry out the advice already given in this and the two preceding chapters, will not be troubled much with this symptom.

MOTH AND LIVER SPOTS.

When these occur on the face they are very annoying to some. The general supposition is that they cannot be removed. Painting them once or twice with the compound tincture of Iodine, (Lergols Solution) will usually remove them. Those who would object to the color of the iodine while it remains, may try the colorless tincture of Iodine. Apply thoroughly.

ITCHING.

Some women will be troubled with intolerable pru-

rities of the genital and adjacent parts. While it is occasionally met among women not pregnant, it is more often an accompaniment of gestation. It frequently occasions the most exquisitely excruciating agony. Absolute cleanliness is one of the first requisites of relief. The frequent use of water, and to this end we can heartily endorse Dr. Shews advice in regard to the use of the sitz bath. Maintain the most perfect cleanliness of the vagina and those structures that can be in any way influenced by its secretions. The sitz bath may be used as often as the itching returns — several times a day. After the bath, a lotion of borax in water may be applied, say one ounce of borax to a pint, or two teaspoonsful of aromatic spirits of ammonia in a glass of water. Sulphite of Soda, one ounce to the pint, applied freely. These lotions may be applied successively until relief is obtained, as thus far it has been impossible to select the most appropriate one. The following lotion after bathing will often succeed when others fail:

Take Chloral Hydrate, 1 ounce,
" Hydrocyanic acid, 40 drops,
" Rose Water to make 1 pint.

I have noticed in some cases acids would succeed, and in others alkalies, though the bath is one of the great remedies. When it proceeds from disease of the womb, that should receive proper attention.

WAKEFULNESS.

Inability to sleep is particularly annoying to pregnant women, and should receive prompt attention, for if long continued may give rise to serious consequences. It may be due to lack of exercise, or too steady confinement in heated rooms. Dyspepsia is a common cause, and should be overcome by a well reg-

ulated diet, and avoidance of late suppers. Tea and coffee may be reckoned among the causes, and should not be taken in the afternoon or evening by those who are apt to be wakeful. Reading anything exciting in the evening, writing, or any severe exercise of the mind has a tendency to prevent sleep. Incorrect living is the underlying cause and to correct it the first step towards cure, and if the cause can be appreciated and understood, we shall succeed.

The sleeping room should be well ventilated, quiet, neither too warm nor cold. A regular hour for retiring is advisable. A glass or two of cold water before retiring may aid in inducing sleep, and a warm bath taken at ninety degrees to ninety-six degrees just before going to bed will often prove a valuable remedy. A rapid sponging and rubbing the surface of the body has much the same effect. It is not advisable to take opiates if possible to avoid them, and for this reason we will not give any recipe for them, nor for that other abused drug, chloral hydrate. When taken let their use be sanctioned and directed by a physician who can observe their effects. The remedies recommended in the beginning of this chapter usually control any unnatural excitement, allay irritability and nervousness and produce sleep. The American nervine or lady slipper may be used with them with advantage. Ten to thirty drops of the fluid extract in the afternoon and again in the evening will usually promote sleep, or it may be used in the infusion with the infusion of squaw vine and cohosh. When they fail fifteen to twenty grains of the Bromide of Potash may be taken dissolved in water at a dose, before retiring, or it may be added to the last dose of the

aforesaid infusion. If preferred it might be kept in a solution, thus:

Take Bromide of Pottassium, 2 drams,
" Water, 3 ounces.

Dose—a dessert spoonful to a tablespoonful. It is not best to use it when it can be avoided as its long continued use occasions more or less disturbance of the stomach.

FAINTING, PALPITATION.

Fainting may occur at any period of gestation, especially when tight lacing is indulged in, or the woman has to remain long in heated rooms or bad air. It is specially liable to occur at "quickening." It is to be treated the same as when it occurs at other times. Lay the patient in an easy position, the head low, and loosen the clothing, allow the cool air to blow in the face, sprinkle a little water in the face, or have her inhale the fumes of ammonia or "hartshorn" as it is more commonly called. Camphor may be rubbed upon the face and neck. Avoid excitement or alarm. Palpitation is a frequent annoyance, and is most liable to occur in nervous women and those who pay too little attention to the rules we have already prescribed. It is generally sympathetic and it will be better to remove the cause by regulating the functions of the various organs, than to resort to drugging for the removal of one of the symptoms. If it is severe and prolonged it will be well to have some competent physician examine the heart and if necessary, prescribe.

SWELLED FEET.

The same causes that operate to produce varicose veins may give rise to swelling of the feet, hands, and

in rare cases of the whole body. The swelling of the extremities will usually be of a dropsical character, pitting upon pressure. Obstruction to the return current of blood through the veins causes an infiltration into the cellular tissues of a watery fluid, and is quite a common ailment of pregnancy. During the night, or while lying down it usually diminishes considerably, to reappear when the extremities are again placed in the most dependent position. Of course it may be induced by diseases of the heart, liver and kidneys, but when these maladies are not present, it is pretty safe to suppose that it depends upon pregnancy and will disappear entirely after delivery. It seldom requires any special attention farther than what can be secured by bandaging as advised for varicose veins, the recumbent position—the fruit diet, or the use of the squaw vine. I have seen the latter perform wonders almost in this ailment, and it is safe and applicable to the general aspects of the woman as well as to a special symptom. The free action of the kidneys favors relief. There are very many of the more vigorous diuretics which can be employed with benefit, but as they will be so rarely needed, when the Hygienic, Dietetic and Remedial measures already prescribed are employed, that I will leave their employment to a physician who sees the case. For my own part I have found the directions I have given already to be equal to the necessity, even if they are simple.

CRAMPS.

Pressure of the pregnant uterus on the sacral nerves is liable to occasion cramps in the lower extremities, some women are very much annoyed by them.

Change of position in lying down ; turn frequently from one side to the other, so that the pressure shall not be too long continued upon those nerves that are distributed to one or the other extremity. Avoid lying on the back long at a time, as that position is most apt to bring pressure upon the large blood vessels and plexuses of nerves. Frequent changes, and brisk friction with the hand, are better than drugs.

ABORTION.

Some women are habitually liable to miscarry when they reach a certain stage of gestation, and a woman who has been once the subject of this accident, is much more liable to a repetition of the occurrence, than one who has not. In early married life the idea often obtains that children are not desirable for some reason or other, and not succeeding in preventing conception, a worse crime is resorted to. How many women have found to their sorrow, that the damage they then do lays the foundation for a miscarriage at every succeeding pregnancy. For this reason alone, hundreds of homes are lonely and desolate. When once a woman has aborted, there is a disposition to do so again when the same stage of gestation has been reached, and the more times she aborts, the stronger the disposition to do so becomes. Many have resorted to feticide in early life to avoid maternal responsibilities, only to find that by and by, when children are desired that they cannot have them, either because they are lost by miscarriage, in spite of precautions, or else the shock their reproductive organs have sustained by the previous abortions has left them no longer capable of conception.

There are few subjects of greater importance to

society than this, and I might exceed the entire space of this volume with its consideration. Whether accidental or intentional, there are few if any accidents that can befall a pregnant woman of a more serious character than abortion. And while it was not my intention to discuss the question in its social or moral aspect, yet when we consider that the great mass of women are debarred from familiarity with those means by which they can limit their offspring, by the prohibitory laws of the country, we can the more readily comprehend the incentive to the greater crime. Legally deprived of the one means, they resort to the other, and I question whether this law is not the cause of infinitely more harm than good. It is to be regretted that it is so, but facts are stubborn arguments. Prevention of conception may be morally, socially, and physiologically justifiable, *but the crime of feticide never!*

With the following quotation from *Dr. Naphey's "Physical life of Woman,"* I shall close the moral consideration of this unpleasant subject: "From the moment of conception a new life commences; a new individual exists; another child is added to the family. The mother who deliberately sets about to destroy this life, either by want of care, by taking drugs, or by using instruments, commits as great a crime, is just as guilty, as if she strangled her new born infant, or as if she snatched from her own breast her six-months darling and dashed out its brains against the wall. Its blood is upon her head, and as sure as there is a God and a judgment that blood will be required of her. The crime she commits is *murder*, child-murder—the slaughter of a speechless, helpless being,

whom it is her duty, beyond all things else, to cherish and preserve.

"The crime is common; it is fearfully prevalent. Hundreds of persons are devoted to its perpetration; it is their trade; in nearly every village its ministers stretch out their bloody hands to lead the weak woman to suffering, remorse and death. Those who submit to their treatment are not generally unmarried women who have lost their virtue, but the mothers of families, respectable *Christian* matrons, members of churches, and walking in the better classes of society.

"We appeal to all such with earnest and with threatening words. If they have no feeling for the fruit of their womb, if maternal sentiment is so callous in their breasts, let them know that such produced abortions are the constant cause of violent and dangerous womb diseases, and frequently of early death; that they bring on mental weakness, and often insanity; that they are the most certain means to destroy domestic happiness, which can be adopted. Better, far better, to bear a child every year for twenty years, than to resort to such a wicked and injurious step; better to die, if needs be, in the pangs of childbirth, than to live with such a weight of sin on the conscience."

Physicians are united in saying that the crime of abortion is more prevalent in the better classes of society who have ample means to provide for the increase, than among those to whom each additional child adds an extra tax and often serious burden. There is no reason to dwell upon the subject here, but the time is approaching when those who have the welfare of the race at heart, must choose between two evils—*prevention of conception* on the one hand, and

abortion on the other. The physical damage done to woman, the moral and social damage to society, will demand consideration when the population question is forced upon us, if not before. Were we to decide the use of terms, we would select "abortion" to mean the intentional or artificial induction of the premature expulsion of the contents of the pregnant woman: "Miscarriage," to mean the accidental and unintentional production of same consequence. The terms are however used synonymously.

There are numerous *causes* of miscarriage. Some abort at a certain time without any assignable cause. Any violent exertion, any thing that occasions shock or spasmotic action of the abdominal muscles: the irritation of piles, excessive sexual indulgence, a blow, a fall, violent emotion, nursing, riding over rough roads, abuse of cathartics, disease and displacement of the womb, affections of the ovaries, the occurrence of fevers, and eruptive diseases, excessive vomiting, excessive weakness, plethora—any excitement that is capable of exciting contraction of the uterus, is liable to terminate in miscarriage. The occurrence of this accident in the first pregnancy is very apt to establish the habit. Women who marry late are more prone to miscarry than if they marry earlier in life.

The *symptoms* of abortion are rather variable, of longer or shorter duration, from a few hours to several days, and the consequences are equally various. At first there is uneasiness, languor, weakness, with aching pain in the back more or less severe. These may be regarded as the preliminary symptoms, and after they have continued for some time, symptoms of labor supervene and resemble the labor at full term,

and are in very many cases much more prolonged and more severe. The mouth of the womb for physiological reasons, is not as readily dilated as at the full term, and in consequence more prolonged efforts are usually necessary, and greater suffering experienced, and inflammations more apt to follow.

In the beginning of the active stage of miscarriage the pains are slight, short, and recur at long intervals. As the process goes on they last longer, are more frequent, and severe. A discharge of blood or mucus may be observed, and, as it proceeds, there is pain in the back, extending round the loins into the abdomen and perhaps down the thighs, increasing in regularity, frequency and force. The pulse is quickened, the skin hot, the patient makes voluntary expulsive efforts, to aid the contractions of the womb, and ultimately the contents of the uterus are expelled.

Sometimes the fetus will be expelled with little pain, scarcely any hemorrhage, and a quick recovery. In other cases it may come on with hemorrhage, and after a protracted and painful labor, the fetus will be expelled. The placenta, or afterbirth, may remain and may not come away until it has been dissolved and thrown off with the discharge that follows, and will be very offensive. So long as the placenta or any part of it remains, hemorrhage is to be feared and irritation or fever liable.

Proceeding, accompanying, and sometimes following the miscarriage there may be alarming hemorrhage. It may be internal or external. When internal the patient and friends may be deceived until a fatal termination is the result. When internal the patient gets pale and faint, exhausted, the pulse becomes quick and thread like. There will be headache,

shivering, pain, the abdominal cavity fills up and becomes larger than the stage of pregnancy will warrant, after a time the membranes give away, the flood gates of life are opened and the vital current escapes with a gush. The women may die from internal hemorrhage without its escape. The more nearly the woman has approached the natural term for delivery the less the danger. Ordinarily the hemorrhage constitutes the primary danger, and it usually cannot be perfectly and permanently controlled, after the progress of the labor has well advanced; until the contents of the womb are expelled and the organ has contracted. The hemorrhage is sometimes alarming, profuse, fatal. Well do I remember my first case; I was not the family physician; he had been sent for; he had not come; the hemorrhage was alarming; my youth was the objection, but something must be done; the danger was imminent; I was called; I found the patient pulseless, blind, deaf, and as white as the sheets upon which she lay. Soaking through the bed, from which several vessels of coagulated blood had been removed, dripped the sanguine tide, until it had run across the room and was dammed in a large pool in the corner. Without waiting to deliberate, or question, and I confess without a ghost of hope, I put ten grains of Gallic acid in a tablespoon and filling it with whisky, I forced apart her rigid jaws and poured it into her mouth—she swallowed,—I hold the wrist, ten minutes of agony; a teaspoonful of fluid extract of Ergot, in whisky; the hemorrhage is slackening, perhaps the supply is exhausted, but I can feel a thrill at the wrist; I repeat the Gallic acid and whisky and the womb contracts; the foetus is expelled; there is no hemorrhage; the family physician arrives, and gladly I turn

over the case; the woman is saved, and whether my practice is scientific or not, and whether nature or medicine is deserving of credit, I get the praise. In the management of miscarriage three indications present from which a selection is to be made; *first*, to prevent it occurring if possible; *second*, to arrest it; *third*, to carry the patient safely through the process, provided it cannot be prevented or averted.

If aware that a patient is in the habit of aborting I should advise the hygiene and diet already recommended, together with the squaw vine and blue cohosh already considered, to which we would advise the same amount of VIBURNUM, or, as it is vulgarly known *Cramp bark*. This with *perfect* rest in the recumbent position, absolute quiet, a calm, unruffled mind, unstimulating food, and the avoidance of sexual relations are the essentials of success.

If we can carry the patient past the fifth month we shall generally succeed. For drugs the three mentioned cannot be excelled. Regulate the bowels with some of the means already mentioned, and if the irritability of the uterus continue we must resort to opium —a grain in powder or pill every four hours until all pain is relieved, to be repeated if it recurs. The action of the opium is as positive as anything can be, and if the symptoms, are active alternate it with the fluid extract or strong infusion of the cramp bark. This is as its name implies a potent remedy, and has stood the test of years. It may be given freely. It is said that the planters of the South formerly compelled their pregnant slave women to drink an infusion of it in order to frustrate their attempts at abortion.

Should our efforts fail in preventing the miscarriage it must be managed like a case of labor, (which see).

Hemorrhage being the greatest danger, if it become too free I would give five grains of Gallic acid in a wine glass of cinnamon water, and repeat as often as may be necessary. Ten drops of oil of Erigeron, on sugar may be given in its place, or even ten drops of fluid extract of cannabis indica.

Care must be taken to assure the entire removal of the secundines. There will be danger until every thing "has come away."

If we can ascertain the cause of abortion we can usually overcome it, or remove the patient from the sphere of its operation.

It is not expected that the unprofessional reader is going to rely implicitly upon the directions we have given. In cases that are alarming or troublesome, a physician must be called, one who can determine the questions that may present to others. Our wish is to furnish means of prevention, and aid the physician in arresting or conducting the process of miscarriage.

Among the results to the mother, other than death, from either accidental or artificial miscarriage, are the whole train of ailments of the reproductive organs of woman. Displacements, inflammations, ulcerations, deformities, ovarian disorders, leucorrhœa, irritation of the bladder, barrenness, mental disturbance, general ailments, etc.

NERVOUSNESS.

Those who experience this condition know what it is without any special description. The nervous system is impaired, irritable, and though there may not be any pain the sensation is even worse: no position seems the proper one; a general uneasiness prevails without any nausea; no special organ appears to blame, and yet in the majority of cases there is a

general impairment of function. We can accomplish much by improving the general condition by the dietetic and hygienic means already laid down, but the special nervousness will in many cases demand special prescriptions. Do not resort to opiates or Dovers powders, Morphine, nor Cloral Hydrate lest you become habituated to their use. When these drugs are used it should be under the supervision of a competent physician. The Squaw Vine and Blue Cohosh, are excellent to allay nervousness, and when it continues in spite of them, I would add to them the Ladies Slipper, or American Nervine, in the proportion of one ounce of the root to the pint of infusion, or when the Squaw Vine infusion is drank freely, one-half ounce will be sufficient. Under its use quiet sleep is encouraged, and a general improvement is induced. A pill of Asafœtida is good, and may be taken if the other does not succeed. When these remedies are employed it is seldom indeed, that narcotics will be required.

SORE NIPPLES.

Some women suffer untold torture from sore nipples during the period of nursing, and occasionally before delivery. When such is the case it is advisable for two or three months before delivery to institute a course of training for them and gradually harden or "toughen" them. For this purpose an ointment may be made of the Squaw Vine as has already been mentioned, or some astringent lotion may be employed. The application of tincture of myrrh twice a day for six or eight weeks before delivery, will usually succeed. Equal parts of Tinctures of Myrrh and Golden Seal cannot be surpassed, at the same time rub the nipples between the thumb and finger, not

however severely enough to make them sore. A solution of alum is good. It is always best to harden them before confinement, as after the child has begun to nurse, it is exceedingly difficult to cure them, and they often become deeply fissured and extremely painful. In such cases Borax is of great value. Take one or two drams of Borax, one ounce of Glycerine, and three ounces of rose water, mix and apply several times a day. Tanin in a little water, with a little Glycerine is a useful remedy, either before or after childbirth in the proportion of ten to thirty grains to the ounce. In fissures, the application of Collodion form a perfect protection from irritation, and should be applied often enough so that it does not get removed. Under its protection an exceedingly tender nipple will heal and become healthy. It forms a more perfect protection than the rubber nipple. It can be got at all drug stores, prepared and for use. Its contraction is sometimes so great as to cause pain, but this objection may be obviated by the addition of a small quantity of Venice Turpentine, with which fact all druggist are familiar, and can supply it properly prepared. In applying it, of course there must be an opening in the coating of collodion, through which the milk may flow. Any druggist will explain the manner of application.

LEUCORRHCEA.

This exceedingly prevalent affection is usually due to the existence of some disease of the uterus or vagina of which it is a symptom. When it has existed prior to conception it is very apt to continue and often gives rise to very great annoyance from the debility, soreness, or irritation it causes. The treatment will be

essentially the same as when it occurs in those who are not pregnant, though instrumental treatment will be inadmissible. Absolute cleanliness is essential; the sitz bath is excellent. The decomposition of the perverted secretions, gives rise to irritation, and must be overcome, by ablutions, injections, etc. Injections may be made of tepid water, or soap suds, or they may be medicated. They should be used daily or oftener to be of any use, and no force should be permitted. An infusion of white pond lilly root is an injection in which many have great confidence. Carbolic acid, five grains to the pint of water used at a sitting is an excellent disinfectant and exerts a control over the abnormal discharge. Common soda, a teaspoonful in a pint is good; astringents in the form of infusions may be used. Hemlock bark, oak bark, golden seal root, crane's bill, are all applicable, but should not be used too strong. As a rule an ounce or less to the pint of hot water, standing till cold and used after the proper steps to secure cleanliness, will be about the strength adapted to the majority of cases. The remedies advised in the beginning of this chapter are of great advantage in this complaint, and the tincture of Pulsatilla, in doses of two or three drops three times a day in addition to the foregoing is a good remedy. It is to be procured at any well regulated drug stores, especially those that keep homœopathic remedies.

The list of remedies for this complaint could be greatly enlarged, but as some of them might have a tendency to cause miscarriage I have purposely avoided them. The discharge being a symptom of disease of some portion or portions of the reproductive organs, the proper time to pay the most attention to its cure, is when the delivery has passed, hence, simple

means only are recommended, first and foremost of which is cleanliness.

FALSE PAINS.

Neuralgic, or rheumatic pains are liable to occur at any stage of gestation and are often very annoying. They can be distinguished from true labor pains which they simulate, by placing the hand upon the abdomen. In true pains the uterus can be felt to contract and harden with the occurrence of the pain, but if it is a false pain, no such sign will be noticed. They are often associated with colic, (which see.) If they become too troublesome a physician had better be consulted, as he can best understand their origin and by removing the cause overcome the effect. We do not apprehend that many of our readers will be troubled with them if they carry out the measures already described.

IRRITABLE BLADDER,

Many women suffer during the entire term of pregnancy from an irritable condition of the bladder, compelling them to urinate every few minutes, passing but few drops at a time with great pain and burning.

In the early months it may be due to mechanical irritation from pressure of a displaced uterus against the neck of the bladder, and later on from pressure upon the body of this organ. In numerous other instances, however, it cannot be attributed to any such mechanical cause, but is due to some abnormal condition of the bladder itself. Usually the urine is not increased in quantity, but rather diminished, and often scalding.

The measures already advised in the chapter on

Hygiene and Diet, will usually prevent this trouble, or the employment of the squaw vine will overcome it, but occasionally a case may resist these means. I would then advise,

Fluid Extract Gelsemium, 15 drops,
" " Populus, 1 dram,
Water, 2 ounces.

A teaspoonful every two or three hours till relieved —to be renewed if the trouble occurs again.

I have also found the homeopathic remedies, Cantharis, or Apis, to relieve this condition. I have employed them by putting five drops of the mother tincture in half a glass of cold water and giving a teaspoonful every hour until relieved. As soon as relieved stop them.

CONVULSIONS.

It is not best to rely on unprofessional advice in these cases, though until the physician arrives the following may be given in teaspoonful doses, every half hour, or hour:

Take Bromide of Potash, one dram,
" " Ammonia, one dram,
" Water, one ounce.
Mix.

A host of remedies have been tried in this ailment and many plans advised, but as professional aid must be employed we do not think it best to advise, particularly as it does not come within the scope of a popular work.

CHAPTER VIII.

ANESTHETICS.

The discovery of Anesthesia wrought an important change in the practice of surgery and conferred a priceless boon upon mankind. The power of anesthetics, of which ether and chloroform are the most important and frequently used, to suspend the sensibility, without at the same time destroying life, is indeed wonderful. With them we are enabled to so effectually subdue pain, that under their influence the most painful surgical operations can be performed without the knowledge of the subject. They produce absolute insensibility to pain. Much has been said regarding the safety of their employment, and although we admit there is a danger, it is very seldom that the person to be operated upon chooses the pain of the operation in preference to the danger of the anesthetic.

The question of danger however, is scarcely worthy of a consideration when we take into account the frequency of anesthetic administration, and the very few accidents. We hear of more accidents occurring among dentists than any where else. Unfortunate as such a circumstance is, it is really no reflection upon the importance, or if you please, the *safety*, of anesthetics. The reasons why accidents occur more frequently among dentists, are plain. There can be no doubt but the sitting position is more unfavorable than the horizontal, a circumstance that requires no extended argument here. Dentists are not supposed to be so well acquainted with physiology and pathology that they can select their cases with the skill surgeons do. Again they do not usually possess, or understand the employment of restoratives, as physicians do. And again we must remember the frequency of administration in dental offices.

We only hear of the accidents, and though a dentist may administer anesthetics in thousands of cases with no unfavorable result, should the next case prove fatal it is heralded to the world, and either the dentist or the anesthetic condemned.

I do not wish to be understood as attempting to defend the dental profession, for they are doubtless capable of making their own defence, but I desire to show that even under such circumstances as they are compelled to employ these agents, the percentage of danger is very small indeed. As near as can be ascertained but one case proves fatal in twelve thousand administrations, a fact that reduces the risk to such an extent that when proper precautions are taken to insure safety, no one need have any fear.

I have during my life been present at the adminis-

tration of chloroform or ether, in several hundreds cases, and have never yet seen a person die from anesthesia. During the late war I had an opportunity, for one year, (spent in a large hospital,) of seeing them used very often, and have since used them in my own practice to considerable extent, and observed their use by others, and in all I can recall but two instances in which any trouble occurred, and in those resuscitation was easily effected with the battery, artificial respiration, stimulants, etc.

Surgeons who have had very extensive experience with these agents assure us of similarly safe results.

If anesthetics may be used to prevent pain in surgical operations, the question very naturally presents, why may they not be equally appropriate for the prevention of pain at childbirth?

Various objections to their employment have been urged, the principal one of which is, that when the patient is under the anesthetic influence, the uterine contractions are suspended and the labor arrested. Theoretically this objection appears plausible enough, but it is not sustained by practice.

Obstetricians who have made this question the subject of special study assure us of the safety of anesthesia properly managed, and that suspension of uterine contraction under their use is the exception instead of the rule. I have myself repeatedly administered chloroform in parturition, and instead of prolonging the labor, I have every reason to believe that it was materially shortened. Under the influence of the drug the irritability of the nervous system was diminished, and those wearing, cutting, irregular, and inharmonious pains that so often prevail and cause so much suffering and annoyance, were suspended, and

instead of expending the energies of the woman, the natural pains become more regular, and efficacious.

In administering the anesthetic I endeavored to secure, and as near as possible maintain that state of semi-unconsciousness, in which the sensation of pain is nearly or quite suspended, without inducing that profound anesthesia that interrupts all muscular action.

I do not wish to be understood that anesthetics cannot suspend labor, such a position would be extremely ridiculous, for it is known that anesthesia may be so profound that all involuntary action may be suspended, the heart and respiration cease, and death result; but I *do* assert that when the anesthetic is employed to induce partial insensibility, that uterine contraction will not be impaired. I am well convinced that the realization of pain will cease under the administration of an anesthetic before muscular contraction is suspended, and I know from clinical experience that the administration of chloroform or ether may be so managed as to overcome pain and not prolong labor, and that *if all other means were to prove fruitless, WITH THESE AGENTS WE MAY MAKE CHILDBIRTH ABSOLUTELY PAINLESS.*

I am supported in my belief by the experience and observation of such men as Sir James Y. Simpson, Dr. Tilt, Dr. W. P. Johnston, H. R. Storer, Dr. Beatty and others, that when there is not some valid reason for withholding it, the proper employment of anesthesia is far less harmful than the suffering that too often occurs at such times.

When the patient is healthy and robust, the suffering inconsiderable, and the labor promising to be short, I should certainly refuse to give the anesthetic,

simply because there would be no necessity for its administration; but, in a weak and feeble woman, suffering intensely, her pain torturing her to no effect, the suffering endangering exhaustion, I would not hesitate for a moment; I would administer the agent in confident expectation of relieving her agony, preventing prostration, regulating the uterine contractions and shortening the labor.

It is a popular supposition that in feeble, anemic, nervous and delicate persons, the anesthesia is specially dangerous, but this is a great mistake; such persons bear it best. Organic disease of the heart and lungs constitute the principal valid objections to the employment of these agents, and even when they exist I am inclined to question whether the danger is not greatest without them. Certain it is that anesthetics *have* been administered to patients suffering from organic diseases of those organs, when important surgical operations have been necessary, with recovery. While he practiced midwifery, Dr. H. R. Storer, who is considered good authority, "made it his rule to always administer chloroform to parturient patients, and this no matter whether the labor was a rapid one or no, or whether the patient had or had not organic disease of the heart or lungs; believing, as he did, that not only was it the physician's duty to relieve pain, here ordinarily so exquisite, and to lessen the risk to both mother and child, as was done by the relaxation of the voluntary muscles effected by the anesthetic, but that for certain manifest reasons chloroform was preferable to ether for obstetric use."

It may be urged that to be of utility in midwifery, the patient will have to be kept under the anesthetic influence for so long a time that it will add to the

danger, and thus render it objectionable. While I would not advise the continuance of the anesthetic any longer than is necessary, it is well known that in certain surgical operations it is necessary to keep the patient under its influence for several hours together. I have myself kept a patient under the influence of chloroform for several hours together during which time it was not allowed to pass off so that complete consciousness returned, and I am glad to add, no untoward results followed. A physician of my acquaintance tells me that he once kept a parturient patient under the influence of an anesthetic for sixteen hours without intermission, and with the happiest consequences. Sir J. Y. Simpson mentions a case in which a child was kept under it until one hundred ounces of chloroform had been used, or about seventy-six hours, and that the convulsions for which it was given were thoroughly subdued by it.

Probably Professor Simpson has done more to prove the value of chloroform in obstetrical practice than any other man; his practice has been extensive, and opportunities for observation unsurpassed. He employed it in thousands of cases, both in hospital and private practice, and the conclusions he arrived at are that it is entirely safe and beneficial.

Dr. Tilt says: "In our own time the sting has been taken from the curse (of pain) by the discovery of chloroform, for which one of our greatest men will ever rank next to, if not before, the discoverer of vaccination."

Dr. Beatty, a well known author, in some of his writings speaks of it in the most enthusiastic manner, and assures the profession and public "that when its employment is properly conducted, it is not attended

with any injurious effects upon either mother or child." In another and a later paper, he says: "I have continued to use chloroform with the happiest results: I have not pressed it upon any, and rejoice, at the end of two years additional experience, to be able to state that in all cases its use has been productive of the greatest relief and happiness, and that in no case has anything unpleasant occurred to either mother or child during its administration, or subsequent to its delivery. It will be easily imagined that my confidence in the power of the agent has increased with my experience."

In *The Physical Life of Woman*, Napheys says: "Is it possible to avoid the throes of labor, and have children without suffering? This is a question which science answers in the affirmative. Medical art brings the waters of Lethe to the bedside of woman in her hour of trial. Of late years chloroform and ether have been employed to lessen or annul the pains of childbirth, with the same success that has attended their use in surgery. Their administration is never pushed so as to produce complete unconsciousness, unless some operation is necessary, but merely so as to diminish sensibility and render the pains endurable. These agents are thus given without injury to the child, and without retarding the labor or exposing the mother to any danger. When properly employed, they induce refreshing sleep, revive the drooping nervous system and expedite delivery."

I might fill the balance of this volume with quotations from the opinions of physicians in favor of anesthesia, but it would not be of any practical value to the woman who is about to become a mother, without

a practical demonstration of its efficiency; statements alone will not render her sufferings any less.

The author does not for a moment suppose that any unprofessional person will ever undertake the administration of an anesthetic. The educated physician alone is competent to give it with safety, and he must be provided with a pure article, and attentively watch its progress. The patient must be in the recumbent position at the time and the stomach empty or nearly so, and the drug is to be inhaled along with plenty of atmospheric air.

Curious and critical persons may enquire why this chapter is introduced into this work if the directions laid down in the three preceding chapters are of any practical value. They may say that any preparation is unnecessary, when chloroform and ether furnish so reliable and easy an escape from pain. In reply I have only to say that I have not written this little work with a view to advocate any particular method of procedure, or remedy to the exclusion of others, but to consider such means as are known to myself and the profession by which woman may escape the pains and perils of motherhood. That there may be other effectual means I do not deny, but if such there are I have not learned of them. Were I to consider one remedy or plan and not others I would greatly diminish the value of this book, and in all probability deprive many anxious readers of means of amelioration and relief. There are some who can avail themselves of one of the plans described, and cannot of the others, while in some the combination of all the means may be necessary. The directions laid down in the three preceding chapters, will, in a very large per cent. of

cases, render the administration of anesthetics unnecessary; but in the cases in which their employment is demanded, it is my desire that she shall know of their value and safety ; and by their proper use we shall succeed if all other means should fail.

CHAPTER IX.

MANAGEMENT OF LABOR.

At the expiration of nine calendar months, or, more definitely, two hundred and eighty days after conception the fetus having advanced far enough in physical development to maintain an independent existence, it is separated from the mother by a natural process, termed *labor*, or *childbirth*.

It is possible for the fetus to survive if this process should occur at an earlier period, and instances are not uncommon of survival at the end of the seventh month, or even earlier, and instances are reported where the infant has survived birth at the end of five months, but it must be conceded that such instances are extremely rare. When labor occurs before the end of the ninth month it is said to be *premature*.

On the other hand we have abundant and well

authenticated evidence to show that pregnancy may be protracted beyond the customary period of two hundred and eighty days without any serious detriment to either mother or child. It ordinarily occurs within a few days of the average time. The laws of nature, however, are not absolutely invariable and no harm need be apprehended should the deviation amount to two or three weeks.

Considerable difference of opinion exists among scientific physicians regarding the extreme limit of variation. The French have enacted in their *Code Napoleon*, that, a child born within three hundred days after the death or departure of the husband, or one hundred and eighty days after marriage shall be declared legitimate; this code admits that the legitimacy of a child born beyond three hundred days may be contested.

Prof. Meigs published a case which he regarded as trustworthy, of the prolongation of the *pregnancy to four hundred and twenty days, or sixty weeks, fourteen months, or five months beyond the ordinary term*. I merely mention the fact without any expressions of belief or doubt. Prof. Atlee mentions two cases of prolongation to three hundred and fifty-six days. Out of one hundred and sixty cases Dr. Elasser found that eleven were protracted to a period varying from three hundred to three hundred and eighteen days. Sir James Y. Simpson mentions four cases in his own practice in which the pregnancy was protracted to three hundred and thirty-six, three hundred and thirty-two, three hundred and twenty-four and three hundred and nineteen days respectively.

'The time lapsing between the end of the seventh

month and delivery, appears to be more for the purpose of perfecting such fetal development as has been already begun, rather than for any new development essential to the maintenance of life. During this time the various organs become more capable of carrying on the functions for which they were destined, and it is during this time that the greatest proportionate increase in size and weight occurs.

The cause of labor at this particular period is shrouded in more or less of mystery, yet the opinion seems to begaining ground that it is due to changes in the structure of the placenta and its membranes, or as they are more commonly called, the *afterbirth*. The fetus being capable of maintaining its independent existence, the destiny of the placenta as a connecting link between mother and child has been fulfilled, and it undergoes retrograde metamorphosis—fatty degeneration; its attachments to the walls of the uterus are gradually severed, and the separation has been so far completed by the end of the ninth month that its expulsion as a foreign body becomes necessary, which is effected by the uterine contractions immediately, or very soon after the birth of the child to which it is yet attached by the *cord*.

In the following directions for conducting a labor it is not presumed to interfere with the duties of the medical attendant who should be present from the beginning to the completion of the process. Neither is it expected that the readers will assume the responsibility of management but it is hoped that by these and the foregoing directions that the patient and physician may be aided, the labor rendered short, safe and easy.

Certain preparations should be made in advance,

particularly the clothing of both mother and child, the bed and its dressings.

The mother should be provided with an abundance of napkins and soft cloths that may be had whenever desired. Chemise and night dresses should button in front and not be too long, so that they can be readily changed when soiled; and during the labor she should wear a loose gown, of any light material, so as to admit of the greatest freedom of motion. *No clothing should be worn suspended by bands at the waist.*

If it is decided that she wear the time honored lying-in "bandage," after she is delivered, it should be prepared and adapted to the size and shape of the woman beforehand, so that no necessity for extemporizing one when needed will arise. Of late years the bandage is falling into disuse, some physicians believing it more harmful than otherwise, an opinion doubtless originating in the abuses to which the bandage is too often subject. When extemporized from a towel, sheet, straight piece of muslin, or anything handy it will be simply impossible to retain it in a position where it will be a source of comfort and benefit. Thus extemporized, it soon slips above the prominence of the hips into a fold round the waist where it exerts a pressure that is uncomfortable and harmful. If a bandage cannot be properly adjusted and retained in position it had better be dispensed with entirely. But, when properly made and gored so as to fit the hips and abdomen, and not slip upwards, it is a source of very great comfort. It should be the widest over the hips where there is the greatest space required, and narrowed above and below, and if necessary may have straps between the thighs. If made at about the fourth month, and fitted to the size of the body then

with a small margin for allowance it will not be far from right at the time it is wanted. It should be from twelve to sixteen inches in width and may be made to lace, button, hook, buckle or pin.

When it can be had a lounge, or cot bed, properly arranged is the most convenient couch on which delivery can take place, for it permits to the best possible advantage the assistance of the attendants, can be readily moved to suit any necessity, and preserves the bed in which she must subsequently lie, dry and comfortable. This temporary bed should be moderately hard and firm so that it may not *sag* downwards beneath the hips of the woman, the head should be a little the highest, and the foot provided with a convenient, narrow foot board, at an agreeable angle of inclination, against which she may press with her feet during her expulsive efforts. A sheet should be twisted into a cord and fastened to the foot piece, for her hands, during her "bearing down pains." It is needless to add that this temporary bed should be of sufficient width for convenience, that she may turn herself from one position to another to lessen the fatigue of unnecessary restraint. To prevent the bed or mattress from becoming soiled, and wet, and more particularly if the temporary bed is not employed, a piece of oil cloth, rubber cloth, or oiled silk, at least a yard square should be placed over it, and above which an old quilt, folded in four, should be spread, and if desirable, over and above this a folded sheet, to absorb the fluids as they are discharged, and admit of easy removal by being pulled towards the foot, without disturbing the bed and clothing that is to remain. When the permanent bed is to be used, the same preparations will be made, with the additional one to

see that sufficient extra folds of bedding be placed under the mattress in the center to prevent sagging. Then let the bed if possible stand in the center of the room.

The clothing provided for the anticipated guest should consist of a plain piece of some *soft* woolen material for a binder. It should be wide enough to extend from the arm pits to the lower portion of the abdomen, but not far enough to prevent the child from drawing the knees up to the abdomen, usually four to six inches wide and about fifteen inches in length, or long enough to go about one and one-half times around the body, the fold coming over the abdomen. Next a shirt, then petticoat, and finally dress, none of which should be starched, and the shirt and binder should be free from embroidery; aprons, bibs, stockings, diapers, etc.

In addition there should be a pair of scissors, pins, linen cord, toilet soap, fine sponge, a jar of pure lard, a piece of soft muslin or linen for dressing the navel, a box of some unirritating powder such as sold by druggists for baby powder; towels, etc., in abundance, and all placed convenient and ready for use when needed. Warm and cold water should always be at hand.

PREMONITORY SYMPTOMS OF LABOR

are generally manifested for a period of time varying from one to two days to as many weeks. Subsidence of the abdomen is one of the most prominent. The stomach and lungs being greatly relieved of the pressure which they have borne for some time, and the sense of oppression occasioned by this pressure disappears, and the woman feels unusually well, buoyant and light. This symptom may be so deceptive that

she will venture abroad, and perhaps by her unusual efforts induce labor under ludicrous and annoying circumstances; women who have borne children attach considerable importance to this sign. Another sign is an increased fullness of the external parts and an augmented secretion, which may even become so profuse as to necessitate the employment of a napkin. There may be painless uterine contractions, and a sense of anxiety experienced, fidgetiness, sometimes a depression of the spirits, and other symptoms of less importance. The discharge is an important sign, particularly if accompanied by a chill, and the fullness of the parts above mentioned, and is usually followed by labor in the course of twenty-four hours.

INDICATIONS THAT LABOR HAS BEGUN

are at first more or less variable and deceptive. There is apt to be a desire to pass urine frequently, and evacuate the bowels. In many cases there will be a marked chill. A symptom of great value however is what is denominated as the "show," which consists of a discharge of glairy mucus, mixed with a little blood, and is soon followed by the "pains" which recur periodically at intervals of an hour or less.

These "pains" may be *true* or *false*. The false pains are caused by spasmodic action of the diaphragm, and abdominal muscles, the spasmodic and irregular contraction of the circular fibres of the upper portion of the uterus, and are mostly felt in the abdomen, and are irregularly continuous; they are limited in extent and are *not* attended with an increase of the discharge, nor dilation of the neck of the uterus, nor protrusion

of the "bag of water." These pains have a tendency to constantly shift from place to place.

TRUE LABOR PAINS,

on the other hand, commence in the lower part of the uterus, are first felt in the back and gradually extend to the front, and into the thighs, recurring with regularity and increasing severity, power, and frequency, until having attained their greatest intensity they remain stationary a moment, and then subside and are followed by an interval of repose. They dilate the neck of the uterus and protrude its contents. During the continuance of a true "pain" if the hand is placed upon the abdomen over the uterus, this organ will be felt contracting and becoming harder with the pain as it advances, and to become softer as the pain passes off.

Having already pointed out the means by which the pains of childbirth are to be avoided, and using the term pain so freely in this chapter, may seem rather inconsistent, but it is only apparently so. Heretofore we have used the term pain to indicate distress and suffering, but in this connection we use the term to signify uterine contraction, which, as has already been shown, may be painless. The reason for this paradox is, that by common consent the word "pain" in obstetrical parlance is used synonymously with uterine contractions, which are, under ordinary circumstances, attended or immediately followed by suffering more or less severe. With this explanation the author hopes to be forgiven if he continues to use the term according to custom.

True labor pains exhibit different characteristics, according to the stage of the process. At first they are "cutting" or "grinding," short, severe, situated in

the back, extending to the abdomen loins and thighs, and are confined to the first stage of labor, while the neck or mouth of the womb is dilating to admit of the exit of the child. As the first stage changes to the second, the pains become "forcing" and "bearing down." The woman can no longer conceal them if she should wish to, but involuntarily she aids them with expulsive and straining efforts. During the first stage the suffering may be considerable if any abnormal condition exists, and the patient will be apt to be irritable, restless, peevish, and perhaps despondent; she desires to be constantly changing position, but as the pains become more forcing in character this condition passes off, and instead of wishing to avoid them or retard them she involuntarily does everything in her power to aid them.

Any question that may arise during the progress of the labor is to be settled by the medical attendant. As early as possible after the labor has begun an

EXAMINATION

should be made, with a view to determine the progress of the labor and the presenting portion of the child. It should be made early so that any mal-position may be corrected before advancement renders it difficult. This tactile examination should be repeated sufficiently often that the physician may keep himself or herself informed of the progress of the labor, but should not be repeated so often as to retard the labor, or become obnoxious to the patient.

If, during the first stage of labor the examination reveals the mouth of the womb hard and rigid, and not dilating as it should, the pain frequent and tor-

menting, I would expect speedy relief to follow the administration of the following prescription:

Take Fluid Extract Gelsemium, }
 " Lobelia, } each 15 drops,
Water two ounces.

Dose—a teaspoonful every fifteen minutes until relieved.

It not unfrequently happens when this is the case that nausea and vomiting occurs, which seems to be nature's method of overcoming this opposing rigidity, and exciting the mucus secretions for the purpose of lubricating the passage, and expediting the delivery.

The bowels should always be freely unloaded before the labor has progressed very far, and for this purpose the employment of an injection of warm water is appropriate. To wait for a cathartic is often out of the question, and the physician who reads this will doubtless appreciate the advice to use the injection, particularly if he has ever attended a case in which the operation of a cathartic and the termination of labor occurred about the same time.

Nature usually provides for the lubrication of the maternal passages by an abundant secretion of mucus, together with the "waters," but if for any reason the mucus is scanty, or the waters discharged unusually early, an artificial lubricant may be used to advantage, for which sweet oil or the mucilage of slippery elm are perhaps the most appropriate.

During the progress of the labor the position of the patient is one of considerable importance, yet I do not believe in compelling the patient to remain in any *one* position. During the first stage of the labor there is no good reason why she may not remain up and about the house, if she chooses to, and even when the

delivery takes place, the position is more a matter of choice and convenience than necessity. Nearly all works, on the subject of midwifery, mention the position on the left side as the desirable one, and some attendants insist that the woman occupy this position from the beginning of the second stage of labor to its completion. So far as my observation goes few women select this position themselves; some will get upon their hands and knees upon the floor; a few in various other positions; but by far the largest proportion prefer lying upon the back with the head elevated, the kness bent, the feet braced and the hands grasping something upon which she may pull during her expulsive efforts. The safety of the child, and the attention the mother will immediately require, are the most important considerations to be observed in the selection of position, and there is little or no objection to a frequent change of position up to the last moment, if she desires.

The room is to be kept quiet as possible, not too dark nor too light, and at a temperature most agreeable to the patient. Too many persons should not be allowed in it, and those should be the ones chosen by the patient herself, before hand, and should be selected on account of their confidential relations to her, their sympathy, good sense, experience, and endurance. No conversation should be permitted that is disagreeable, exciting, or depressing. She needs sympathy, encouragement, confidence and fortitude. Nothing can be worse than to have those upon whom she relies, filling her mind with fear or discouragement. Their sympathy must never permit them to give vent to sorrow by expressions of grief.

During the first stage the ordinary diet may be

allowed, and at the last, such warm drinks as she may desire.

Much harm is often done by advising the woman to "bear down," and make explosive efforts too early, by which she is only worn out and exhausted without accomplishing advancement. Until the womb has been dilated to admit of the passage of the child, no amount of explosive effort on the part of the mother will avail. It is wrong to rupture the "bag of waters" until this dilation has been effected, for it acts as a wedge that prepares the passages and advance of the child. It is usually ruptured at the beginning of the second stage and comes away with a gush. If it is ruptured before dilation occurs, it will have a tendency to retard the labor. If it is not ruptured spontaneously after the womb is well dilated, and the labor well advanced, this can be easily done with the finger nail. There is more danger of rupturing it too early than too late, and for this reason interference should be well considered before undertaken. These remarks are intended more particularly for the unprofessional, though we know of some physicians who would do well to consider them. It is presumed however that the physician in attendance will know his business and exercise his judgment, to which bystanders are expected to yield. There are some cases where the labor will proceed to a termination in his absence, and in such cases the full force of this chapter must apply.

As the labor nears its termination, the pains are apt to become more protracted and forcible, and often more frequent, and are sometimes attended by cramps in the limbs. These latter may usually be relieved by friction. An examination will reveal the present-

ing part of the child pressing upon the perineum or floor of the pelvis, where it may be felt to advance and recede with each pain, gaining a little each time. The exertion now reaches its greatest hight, the soft parts dialate and yield ; one pain follows an other in rapid succession, so that one begins almost before its predecessor has terminated, until with a mighty effort the head is expelled, after which a short rest may occur, then with one or two more efforts the birth is accomplished.

In the employment of anesthetics I have always endeavored to so manage that during the last throes of labor, when the pain is most severe, to have the sensibility the most completely suspended. It aids in the relaxation of the perennal muscles, and in this way saves suffering and facilitates the labor.

Nearly all obstetric writers give explicit directions for supporting the perineum during the last few pains, with a view to prevent it from being ruptured. The support should be gentle, and not retard the labor but merely to aid the perennal muscles in directing the head of the child in the axis of the natural outlet without tearing through the tissues. The support must be gentle, even and constant.

Sometimes it happens that when the labor is well advanced, the efforts become less powerful and may be suspended altogether, owing to muscular exhaustion. It is then that certain remedial agencies may be called into requirement, and the question for the physician to determine is, whether he shall employ forceps to extract the child, or whether he shall make use of means to stimulate uterine contraction, and thus effect delivery. It will be very seldom indeed that those who have carried out the advice given in

previous chapters of this book will require a practical solution of this question. When however such an emergency shall arise, five to ten grains of the sulphate of quinine will usually be adequate, and more particularly if her muscles are naturally very feeble. If it is due to inertia of the uterine muscles, the spurred rye or ergot will be appropriate, of which one-half to one dram of a reliable fluid extract may be given every fifteen or twenty minutes until the purpose is accomplished. I regard it as a good plan to combine the ergot and quinine and give at one dose,

Quinine, 5 grains,
Ergot Fluid, $\frac{1}{2}$ dram,

and if necessary repeat in an hour; this may be regarded as a large dose, but it is best to get the effect soon, if we desire to at all. The black cohosh, cimicifuga, or macrotys, as it is variously called, possesses similar properties, and from ten to twenty drops of the saturated tincture or fluid extract, may be given every twenty minutes until the expulsive efforts are resumed. This latter remedy is open to one objection when given in sufficient quantity to produce this effect and that is that it is liable to cause an unpleasant fullness and pressure in the head. The reader is referred to the consideration of this remedy in the chapter on remedial measures.

Some practitioners regard it as a good practice to give, just a few minutes before the birth is accomplished, a dose of one-half to one dram of ergot with a view to secure certainty of contraction of the womb afterwards. This is a plausible theory, and though it may be done unnecessarily, yet there is little harm likely to result from it, and much possible good, and I have in many cases carried it out.

As soon as the head of the child has made its exit, the mother experiences sensible relief and may be assured that the worst is over. The whole body may follow at once, but usually there is a short pause when the body turning sidewise is expelled by another contraction. When the head has made its exit the nurse or some assistant who has been previously instructed, should make gentle pressure upon the uterus with her hands and follow it down as it contracts, and keep up the pressure firmly until the bandage is put on. When this is properly done it will secure the necessary contraction of the uterus, the afterbirth will be quickly expelled and no trouble from hemorrhage will be liable. When flooding occurs in such cases it is usually because the uterus does not contract and close the blood vessels, consequently the importance of the advice, relative to the pressure upon and grasping as it were the uterus, as the child is being expelled, is obvious.

As soon as the head is born, it should be immediately ascertained if the cord be wound around its neck or not, and if it is, it must be loosened, for if this is not done the child may be strangled. Immediately after the child is born, it is to be laid on the right side, its face free and exposed to the air, and its mouth examined and, freed from any mucus that may have accumulated and which will otherwise interfere with respiration.

As soon as the child cries, and it is generally sure to find out its abilities to do so very quick, the cord may be severed, and the birth so far as the child is concerned is complete. If the cord is free from the neck and cannot be felt to pulsate, it should be severed at once, whether the child cries or not, and if it does not, arti-

ficial respiration is to be resorted to. In severing the cord, first take a waxed cord, piece of tape or other suitable material for a ligature, and tie around it two or three inches from the child's body. Tie the cord again an inch further from the child and with a pair of scissors cut the cord between the two ligatures, taking the oft reiterated precaution to see that no part of the child is cut at the same time.

Several homeopathic writers have advised against tying the cord at all, but severing without as soon as the pulsation ceases. When the cord is severed, if the child breathes, it is to be laid upon a soft, warm cloth that is prepared for its reception, and handed to the attendant, upon whom the duty devolves of washing and dressing and making it presentable.

If there is any delay in the child's breathing after birth, let the cool air come upon its skin, which is a natural excitant of respiration, or blow in its face or mouth, or dash on a little cold water, slap it briskly upon the back and chest, apply brisk friction all over it. If this does not answer, inflate the lungs by blowing in its mouth, and then forcing out the air by pressing the chest, and repeat till it gasps. Grasping it by the ankles and swinging it with the head downward, has been recommended as an efficacious plan of restoring suspended animation. I have never had occasion to try it.

If the short interval that occurs between the expulsion of the child's head and the rest of the body is protracted beyond two or three minutes, manual assistance should be rendered. Friction and firm pressure over the womb is to be made, and inserting a finger into the child's armpit, slowly extract it. No other course is left. Do not hasten too much least you

favor hemorrhage. Do not delay too long or you endanger the child.

When there is no trouble about the child, a few moments suffice to secure its separation and removal, when the mother must be attended to; she must not be neglected while the child is looked after.

If the pressure before mentioned has been properly carried out, the uterus will have contracted and detached the afterbirth: and it may be already expelled, but if it has not, and the flooding does not demand attention, the mother may be permitted to rest a few minutes before making any efforts to extract it. If after waiting half an hour there is no after pains, friction upon the abdomen, grasping the uterus with one hand through the walls of the abdomen, and with the other hand making gentle traction upon the cord, is to be resorted to, care being taken not to use force enough to tear the cord from the afterbirth. When one or two efforts of the kind is not successful, the hand is to be introduced gently into the uterus, and grasping the afterbirth, at the same time keeping up the pressure from without will generally cause a contraction and both hand and afterbirth will be expelled together.

When the hemorrhage is too profuse give ten grains of gallic acid in a tablespoonful of water, or a teaspoonful of a fluid extract of ergot, at once, and proceed to remove the afterbirth in the manner above advised. and apply the bandage, if it has not been applied immediately upon the birth of the child.

When the afterbirth has come away, all the soiled clothing is to be removed from the mother, the parts cleansed with warm water and dried, and oiled with pure sweet oil or lard, a soft, warm napkin applied,

and dry, clean clothing put on; she is then placed in bed and allowed to rest.

It is advisable to place under her, a folded sheet or quilt, to absorb the discharge that will continue, in such a way that it can be removed when soiled without disturbing the bed. Attention should be given that she does not suffer from exhaustive hemorrhage, or make any exertion. She may lie upon her side or back as she choose.

While this is being done the child should be receiving attention. It must be carefully washed. First, rub it thoroughly with lard or some bland oily substance, and then carefully wash with toilet or castile soap and warm water. The oil is necessary to remove the cheesy secretion, soap and water not being sufficient, and if any is left it is apt to cause irritation and excoriations. Very often the skin diseases that occur to infants are due to carelessness at the first washing. Rub the oil well in with the palm of the hand, and for washing use a silk sponge or very soft cloth. Remember, the child's skin is very tender and must not be treated at all harshly. Dry thoroughly. In performing this operation only a part of the child's body should be exposed to the air at a time. Attention should be given that every orifice of the body should be thoroughly cleansed.

When the ablution is completed examine the cord to ascertain that no oozing is going on, for if there is another ligature must be put on. Take a piece of fine linen rag, two or three inches square, and cut a hole in the center large enough to pass the cord through, and lie on the abdomen. Take another piece similar, and wrap the end of the cord in it, turn it to one side and apply the binder middling firmly, and dress the

child. This fragment of the cord generally dries, withers up and comes off in from four to six days. The time may vary a little and no force should be used to effect its removal.

As soon as the child is dressed it should be put in bed with the mother and applied to the breast. By doing this we in a very considerable degree avert the danger of flooding, and prevent what is known as milk fever about the third day, which is apt to occur if the secretion of milk comes on suddenly. Another reason is that the mother's breast usually contains a secretion very desirable for the child to have, as it acts as a laxative and promotes the expulsion of the "meconium," a tarry substance found in the bowels of new born children. This same secretion from the mother's breast stimulates the liver, and is far better for the child than the horrid practice that frequently prevails in many portions of the country of feeding it with urine and molasses. Disgusting as such a practice is, there yet remains among the ignorant and superstitious a belief that it is necessary for the welfare of the child. None outside of the medical profession have any idea of the prevalence of such opinions.

If the nipple is not prominent enough to enable the child to grasp it, it may be drawn out by taking a bottle and filling it with hot water, or dipping it in hot water and applying it over the nipple, as it cools a sufficient degree of suction will occur to draw out the nipple, then apply the child immediately. If necessary moisten the nipple with sweetened water.

It would seem almost absurd to say anything about the disposal of the afterbirth, yet knowing as I do that the traditions of a superstitious past cling with extraordinary tenacity to all that is concerned in re-

production, it may not be considered so much out of place. I have been amused at the ceremonies to which the afterbirth has been subjected by persons who were otherwise enlightened and intelligent. So far as the mother and child is concerned it makes no difference what becomes of it, only that its complete removal is effected, and to burn it or bury it is a satisfactory and effectual method of disposal.

CHAPTER X.

MANAGEMENT AFTER BIRTH.

For a longer or shorter time after delivery, the mother will continue to require attention, while the care of the child has only just begun. The condition of the mother will necessarily vary, depending very much on the ease with which she has passed the ordeal, as well as upon her previous physical condition. Her nervous system will have received a shock of variable intensity, and if the labor has been an easy one, or if she is robust and in a good condition to sustain such impression the shock will be mild and of short duration, and in proportion to its subsidence, will her return to health and comfort occur.

The agitation caused by the labor will be succeed by a sense of lassitude and depression, similar to what occurs after any severe exercise. The circulation and respiration will be affected ; the continuance will present a dull appearance, and it frequently happens that

almost before she has reached her bed, she will be attacked by a chill, that may make the teeth chatter. Under ordinary circumstances this will soon pass off, the circulation becomes natural as manifested by a return of the regularity and fullness of the pulse, the heat of the surface returns, the skin becomes moist, every function becomes natural, and the most perfect, calm and delightful slumber follows. During this period a watchfulness is to be observed. If the shock is severe and prolonged, the prostration extreme, respiration slow and sighing, or scarcely perceptible, the pulse slow and weak, or rapid, small and fluttering, interference will be necessary, and small quantities of stimulants may be given. Ammonia, wine, brandy, or whiskey in any palatable form may be given in small quantities and often repeated, and gradually withdraw as recovery is established.

During this time the possibility of hemorrhage must not be forgotten, for the symptoms already enumerated may be dependant upon loss of blood. Who ever officiates in the capacity of nurse must make frequent examinations to ascertain if the discharges are too profuse, or if they are wholly arrested. If the hemorrhage is too free, it may be controlled by cinnamon tea, five grain doses of Gallic acid in water, or one-half teaspoonfull of Fluid Extract of Ergot. The doses to be repeated once in from one to four hours, as may be necessary. Few will require such interference and particularly if the directions previously given have been followed.

During this time she is to be kept quiet, the room slightly darkened, and no talking nor whispering is to be tolerated. She needs rest, sleep, recuperative repose to restore her energies; but during sleep she is

not to be left wholly alone, a competent person is to remain with her to observe that nothing goes wrong.

For the first few days she is to maintain the recumbent position, though she may frequently turn from side, or even sit up in bed, but nearly all authors are united in advising that she remain in bed, for the most part of her time until the ninth or tenth day. Women who have more than usually feeble muscular tissue, will do well to remain even longer before any exertion is made that will require muscular effort.

The reason for such advise is that the uterus which has been considerably increased in weight during gestation may have time to resume its proper size before its natural supports will be called upon to retain it in its proper position in the pelvis. By following such directions, the mother will materially diminish the liability to uterine displacements. I am well aware there are those to whom such advice will seem a mockery. Some are compelled to disobey because upon their daily toil depends their supply of life's necessities; others again accustomed to the hardships of life will have developed sufficient muscular power that recuperation will not be to them the necessity it is to the weaker and more sensitive. In a previous chapter allusion to these circumstances has been made.

INVOLUTION.

After delivery the uterus undergoes a process termed *involution* by which it resumes its previous size. On the perfection of this process materially depends the mother's future health. Having been increased in weight from sixteen to twenty times or even more, it may be readily understood what an arrest of this process of involution implies. If this process is delayed

there will be pain, weight, aching in the back, hysteria and perhaps flooding. The hand over the abdomen can detect the uterus large and tender. Such a condition demands professional attention. There is often inflammation, or there may be a lack of muscular and nervous power—atonny. When this is the case flooding is liable. If the mother continues the use of the squaw vine and cohosh plants, already described there will be little danger, but should it occur it will be best to employ a competent physician.

DIET.

During convalescence the diet of the mother is of importance. For the first three or four days a light diet is to be employed. Oat meal, gruel, tea and toast, light broth, and anything of an unstimulating character. This is to be maintained until the milk fever has passed which generally occurs about the third day, if at all. When this secretion comes on gradually but little disturbance will be noticed.

If the diet is stimulating the secretion of milk will be apt to be attended with considerable fever, painful and swollen breasts, etc., which it is desirable to avoid. If however the mother is feeble a more nourishing diet will be necessary from the first and beef tea may be given, mutton broth, etc. After the milk fever has passed the mother may have a nutritious diet, milk, oysters, beef tea, mutton broth, rice, eggs, etc., etc., gradually returning to her customary diet, which should be very nutritious.

LOCHIAL DISCHARGE.

After delivery a discharge termed the lochia, takes place from the mother's genitals, varying in its duration in different women. In some it may dry up in

a few days, and in others continue for a month or even longer. Its too early disappearance may be followed by constitutional disturbances, and if not re-established will result in an impairment of the general health, associated with some disease of the uterus and its appendages. On the other hand if too long continued or too profuse it will demand attention on account of causing debility. At first the discharge is composed largely of blood. After a while it changes in character and has the appearance of a secretion, for a few days it is of a red color, but rather thinner, and more watery than blood, and does not clot; then it becomes yellowish, perhaps greenish, watery with often the appearance of puriform matter, and finally of a soiled water appearance. It is accompanied with a peculiar odor. Upon its free removal very much depends and for this purpose soft napkins should be kept applied and removed as often as they become soiled. To permit this discharge to remain in the bed and about the mother is simply to endanger her life. It will develop fever and poisonous infection. To negligence of this simple precaution many a woman's life has been sacrificed. Frequent ablutions should be employed as it often becomes acrid and excoriates the parts with which it comes in contact. This may be prevented by washing with warm milk and water, and applying some bland oily substance. When there is considerable fetor and the discharge has the appearance of coming from a foul or unhealthy sore, its absorption will be pretty certain to cause very serious consequences, of which childbed fever is a type. Under such circumstances I would advise that vaginal injections of some antiseptic material be used. A wash of ten grains of permanganate

of potash, dissolved in a pint of warm water and injected at once does well. The same quantity of carbolic acid in a pint of warm water is also good and can be had at any drug store—and even if they could not, soap suds are always at hand and far better than nothing at all. Before using the carbolic acid or potash, use a lotion of warm soap suds to wash away the decomposing and noxious fluids. Repeat the process from two to four times in twenty-four hours. Place the woman on a bed pan and inject with any continuous syringe. If no bed pan is at hand fold an old quilt to absorb the fluids and proceed. Absolute cleanliness *must* be enforced.

There is no doubt but this discharge sustains an intimate relation to the uterine involution—that it is the method by which the uterus is relieved of what has now become superabundant tissue. Caseaux remarks, "that discharge continues from delivery until the womb has regained its normal size and consistency."

During the milk fever the lochia is generally diminished. Its suppression is caused by cold and the mother should be extremely careful to avoid taking cold during its continuation. If it is suddenly arrested there will be fever, general constitutional disturbance, bloating and tenderness of the abdomen, etc. As a remedy in such a condition, I have confidence in the administration of a tea of *serpentaria* root. Add an ounce to a pint of boiling water and give in one or two tablespoonful doses every hour until the discharge is re-established. Aid it by a warm flax seed poultice to the abdomen and genitals. If there is much pain and fever, one-half grain of powdered opium may be given in connection with these other

means, and repeated in from two to four hours according to the necessity. If the lochia becomes too profuse and exhausting it must be modified; a tea-spoonful of wine of ergot may be given twice a day, to improve the contractile power of the uterus, and some of the elixirs of cinchona and iron may be given two or three times a day for their tonic influence. These elixirs can be found in every well regulated drug store, or may be substituted by one or two grains each of quinine and carbonate of iron at a dose.

AFTER PAINS.

Usually within an hour after delivery uterine contractions will occur which resemble more or less closely the throes of labor and are termed *after pains*. As a rule following the first delivery they are so slight as to occasion very little or no annoyance, but become more and more severe with each succeeding child. Most writers regard them as salutary, being necessary to expel the clots that have formed within the uterine cavity, and thus prevent hemorrhage, and to enable the organ to diminish its size. Prof. Bedford says, "These pains are what are known as *after-pains*; they are nothing more than the contractions of the uterus ridding itself of the fluids contained within it, and at the same time, through these contractions gradually returning, as far as may be to its pristine state. After pains, therefore, instead of being regarded as morbid or pathological, are to be classed among the usual and necessary phenomena of childbirth. In a woman with her first child—a primipara—these pains are ordinarily slight; in a multipora, on the contrary, they are often times severe and harrassing. The reason of the difference is that, in the former

case, the uterus is invested with vigor and tenacity, and consequently soon becomes restored to its original condition; while, in the latter, its walls are flacid, and the contractions, therefore, more protracted."

Prof. Bedford's words reflect to a great degree the opinions of the medical profession in this respect, and furnish us with a practical suggestion, viz.: the more nearly perfect the integrity of the uterus and its associate tissues, the less pain there will be after labor. This suggestion brings us back to a subject already partially considered in a previous chapter, in which directions are given for the removal of abnormal uterine conditions, and restoration of the muscular tissues to a healthy and vigorous state, by the employment of the squaw vine, blue and black cohosh. True, our observations then were made with a view to relieve the pains of labor, but they hold equally good with reference to the relief or prevention of after pains. I can assure the reader that this is not an unfounded hypothesis, but an established fact often demonstrated.

There are those, however, who have not had the advantage of previous prepartion, and for the relief of such, it is highly proper to consider the remedial resources at our command. When these pains are protracted by a lax and enfeebled condition of the uterus, a small dose of ergot will often promote the contraction, and thus diminish their repetition. The remedial influence of the black cohosh or cimicifuga is similar, and may be continued while the afterpains last, in the doses already considered. See page 105.

When these remedies are unavailing and the suffering great, it may become necessary to resort to opiates to diminish sensibility to pain. Opiates, however, do not

always act kindly and when this is known they should be avoided. When it becomes necessary to resort to opiates one or two teaspoonfuls of paregoric is generally sufficient, or one-sixth to one-fourth of a grain of morphine, or five to ten grains of dover powder. I prefer to avoid opiates if possible, as they are apt to derange the secretions, and the blue cohosh has usually met my expectations.

THE BLADDER.

It not unfrequently happens after a somewhat severe or tedious labor, that the woman will loose control of the bladder, and either be unable to discharge the urine at all, or perhaps it will constantly dribble away from her as fast as it is formed. In other cases she may have power to pass or retain it, but its passage will be painful, and the urethra remain sensitive and tender.

When she is unable to discharge the urine and the bladder is distended and painful, the catheter should be resorted to, and it is a very easy matter to draw off the urine if the operator *knows how*; as no one but a physician would be likely to attempt to pass a catheter no necessity exists here for describing the operation. The woman should make an attempt to pass water in the course of six or eight hours after delivery. The first attempt will quite likely be somewhat painful and if the urine is hot and burning it may be well to resort to anodyne diuretics, and a teaspoonful of the sweet spirit of nitre may be given in a cup of flaxseed tea. If this does not afford relief it may be repeated and two drops of tincture of belladonna added to the next dose.

Should the woman be unable to pass her urine in from ten or twelve hours and there is any

evidence that there is any urine in the bladder, before making use of the catheter the following expedients may be tried: Apply hot wet cloths to the lower abdomen and external genitals, or a warm flax-seed poultice, the warmth and moisture will often relax the tissues and the discharge takes place. The influence of the mind upon matter is often illustrated in cases of the kind as stated by Prof. Bedford in his *Principles and Practice of Obstetrics*. He says: "I somewhere read years ago of the practice in these cases of pouring, within the hearing of the patient, water from a vessel slowly into a pitcher; and I can vouch for its efficacy in several cases in which I have had recourse to it. * * * It is a curious, but interesting circumstance that, occasionally, after the patient has made vain attempts to relieve herself, and the failure of the ordinary remedies, the moment the accoucheur suggests the necessity of having recourse to an instrument for the purpose of drawing off the water, madam, alarmed at the idea of an instrument, tells the nurse in an undertone, 'Oh, I think I can relieve myself now;' the nurse brings the bed pan, and sure enough the bladder is evacuated." Some persons cannot evacuate either bladder or bowels upon a bed pan, but seated upon an ordinary chamber vessel they find it easy enough, and particularly if it is half filled with hot water."

When the urine dribbles away without any control, a few drops of tincture of belladonna will generally rectify the trouble. Give a drop every hour or two until several doses have been given. If this fails to be productive of good effects Bedford recommends ten drops of tincture of cantharides twice a day in a wine glass of flax seed tea.

In some cases the kidneys will fail to secrete any urine and there will not be any in the bladder to evacuate. In such cases the remedies must be addressed to the kidneys instead of the bladder, and a convenient prescription will be found on page 80—81.

THE BOWELS.

The custom prevails in many parts of the country of giving the lying in woman a dose of physic upon some certain day after confinement, usually the second or third. There is no necessity of such a procedure unless the condition of the bowels demands it, and if the woman has kept her bowels in a proper condition before, there will be little necessity for cathartics now.

When, however, a necessity for opening the bowels exists, the employment of a dose of castor oil the second or third day generally suffices and also answers the additional purpose of establishing a flow of milk. If the condition of the milk does not require anything of the kind, a seidlitz powder, a dose of citrate of magnesia, or an injection, will be equally satisfactory, and often far more acceptable to the mother's palate.

DISTENTION OF THE ABDOMEN.

An accumulation of gas in the bowels will give rise to distention and suffering, some times amounting to severe distress. Pressure will cause pain, which may be mistaken for inflammation. In distention the swollen abdomen will sound like a drum if gently tapped upon, and pressure though at first painful, will, if gentle and continued, soon give relief, while if inflammation is present the longer the pressure is continued the more painful it will become. In this trouble few if any remedies can equal turpentine. Add one-half to one teaspoonful of "spirits" of tur-

pentine to an ordinary dose of castor oil and take at a dose. If the taste is offensive it may be given in capsules or in syrup of gum arabic. The application of a warm flannel sprinkled with turpentine is also beneficial. An excellent homeopathic remedy is *bryonia*, of which five drops of the tincture is to be dissolved in one-half glass of water and a teaspoonful given every hour.

MILK FEVER.

Ordinarily, in from twenty-four to forty-eight hours a febrile reaction, more or less severe will be experienced. If the diet of the mother has been stimulating, the fever will be more severe than otherwise. If the breasts have been filled with milk for some time, but little fever will be likely to occur. There may be a chill, followed by fever, rapid pulse, headache, unrest, and a more or less complete arrest of the lochia. This phenomena may be accompanied by distention and pain in the breasts hence the term "milk fever." This will usually pass off in a few hours and generally does not require any treatment. When severe, sponging the skin with tepid water, in which a little soda has been dissolved, may be employed, and a few doses of aconite given to promote sweating and abate fever. Put five drops of the tincture in half a glass of water and give a teaspoonful every hour or oftener.

THE NIPPLES AND BREASTS.

If the mother has taken the proper precautions to harden the nipples with astringents, and subjected them to handling by rubbing between the thumb and finger, their tenderness will have been diminished and she will not be liable to trouble. But if she has not given the subject any attention, in a few days after

the child begins to nurse they will become exquisitely sensitive and painful. An application of the child will be a severe punishment, and nursing will be a severe struggle between duty and physical suffering. The nipples are liable to become excoriated or cracked, and being constantly in use are difficult to cure, for every time the child nurses it opens the fissures anew. When the pain becomes so great that the mother cannot tolerate the efforts of the child she becomes liable to another affliction. The breasts become engorged, inflammation ensues, an abscess forms and she has a "broken breast."

When the nipple is excoriated, the application of astringents is appropriate, and an ointment of galls may be used after nursing. When there is merely tenderness, borax and water is a good application—brandy and water, or tincture of myrrh may be applied. If the nipple is fissured, it is a good practice to unite the edges of the fissure as closely as possible and cover it with collodion which forms an artificial skin of sufficient firmness to admit of the child's nursing without being removed. It must be prepared by adding about one part of Venice turpentine to six parts of pure collodion or it will be apt to contract so much on drying as to cause pain. In using it I would apply to the fissure a solution of five grains of nitrate of silver in an ounce of water, and as soon as dry put on the collodion with a brush, applying several layers until it is sufficiently firm to hold and keep the fissure closed and protect it from the child's mouth. Repeat the process, as often as it comes off or gets loosened. A great variety of rubber shields are to be had from which protection may almost always be selected. Abscess of the breast may be due to the cause just de-

scribed, to cold, to injury, etc., but is oftenest due to carelessness, in neglecting to have the milk properly drawn. The affected breast becomes "caked," swollen, painful. As soon as anything of the kind is noticed apply warm poultices, and abstain from taking much fluid. Camphorated oil makes a good application. I have also found the oil of peppermint painted over the entire breast a very effectual and agreeable remedy. The breasts should be supported and not allowed to hang down, which increases the trouble. As an internal remedy give

Tincture of aconite root, 10 drops,
" belladonna, 10 drops,
" Poke Root, 20 drops,
Water 4 ounces.

Dose—a teaspoonful every hour or two until the inflammation subsides. If matter forms, as soon as it can be detected, excavate it with the knife

NURSING SORE MOUTH.

During nursing, and sometimes during the latter months of pregnancy the mother may be afflicted by a peculiar species of sore mouth, which may be so severe as to cause great suffering and seriously interfere with the taking of food. This condition is supposed to depend upon some peculiar unhealthy state of the blood, and is oftenest found in those who are suffering from an impaired condition of the general health, among the scrofulous, etc. The treatment consists, in improving the general health; cinchona, iron, quinine, may be taken with a nourishing diet, and the mouth washed with borax and glycerine in water, chlorate of potash, an infusion of the common gold thread, or golden seal; let them all be of a strength that can be used without causing much pain. I have found the *Baptisia* an excellent remedy. I have

usually given it in doses of fifteen drops of the tincture three or four times a day. The remedy can usually be obtained at first-class drug stores. It is also called wild indigo, horse fly weed, etc. The homœopathic remedies most likely to suit are arsenicum, mercurius, nitric acid, etc.

THE INFANT.

Although a consideration of the child after the delivery is completed does not come within the scope of painless childbirth, a brief allusion to the care of the young "eminent" cannot be far out of place, and a few pages on the subject will perhaps be tolerated by those readers who have borne with us thus far.

CHILD STUFFING AND DOSING.

Almost simultaneously with birth does feeding and physicing begin. So extensive is the practice that a baby may consider itself extremely fortunate if it escapes a whole hour after it is born without having to take something, and from that time forward there is always a teaspoonful of some food or drug waiting for it. If ever it ventures to test its lungs or voice, it must be considered either sick or starving, and down goes the favorite "dope." Indeed they sometimes live in the world a whole day without getting their little mouths empty enough to enter an objection to the way business is done, by a cry. Ludicrous as such remarks seem, they are nevertheless *too* near the truth, for, from the baby's arrival it is expected to freely partake of "pap," "sling," castor oil, paregoric, soothing syrup, etc., etc., or else it must eat every time it wakes up or oftener.

I sincerely hope that those who read this little work will remember that the baby is not always sick nor

hungry when it cries a little. More babies die from over than under feeding. Nothing can be farther from my wish than to neglect these little strangers, but when we realize the growing tendency to keep them half stupid with opiates in the form of powder, paregoric, soothing syrup, baby syrup, and the like, we are sure our language is not half strong enough. There are times when opiates are needed, but to stultify a child's intellect, and depreciate its vitality by constant narcotizing is an abomination.

While a child's stomach is intended to receive nourishment quite often, it is to be remembered that one supply should be received and digested before another is needed. Great harm may be done by keeping the little stomach distended all the time. The infant is not capable of reasoning and will often nurse when the stomach is distended with milk. It is not uncommon for it to worry and take the breast greedily, when the judgement of the nurse or mother should prevent

NURSING.

Usually at birth the breasts of the mother are filled with a peculiar secretion in which is found an element known as *colostrum*. This possesses some purgative properties, and will cause the child's bowels to move, and free the intestinal canal of the dark tarry substance already alluded to as the meconium. This secretion from the mother's breast is better for this purpose than any drug and for this reason the child is to be put to the breast early. Another reason is, its efforts will induce a flow of milk. There is still another reason, and that is, a baby can be taught to nurse with less trouble before it has been fed with a spoon than after.

The breast may contain but little nourishment at first, still it should be regularly returned to the breast, the same, for the benefit of the mother if nothing else, as it causes the contraction of the uterus. At first it may cause her considerable pain.

If there is no milk in the mother's breasts it will become necessary to supply artificial nourishment, and for this purpose diluted cow's milk is most appropriate. It may be diluted about half and half with warm water and a little sugar added. Without entering into a consideration of the relative compositions of human and cow's milk suffice it to say that such a mixture is the most nearly perfect substitute at hand and may be given about as often as the child would ordinarily be nursed, which is on an average about once in two hours, during the day, and about once in three hours at night. This may be varied a little, and as the child becomes older the intervals should be lengthened. Ordinarily it may be permitted to take enough to satisfy itself.

MOTHERS NURSING THEIR CHILDREN.

The experience of ages, and the dictates of common sense all unite in declaring that the most natural food for a new born infant is its mother's milk provided she be in a proper state of health. As her blood has nourished during its foetal existence, it is now her duty to nourish it with her milk. True there are circumstances which will necessitate some other means of furnishing it subsistence, and if the mother cannot nurse it, the next best substitute is a nurse. In the selection of a wet nurse, obtain one as near as possible the age of the mother and whose child is not much older than the child they are also

to nourish. It is needless to say she must be free from disease. Even when the mother herself undertakes to nurse the child, if she becomes extremely emaciated, or attacked by any disease it is best that she transfer her little charge to the breast of a hired nurse.

When a proper nurse cannot be obtained the next resource is cow's milk, which may be diluted, and have a little sugar added, as has already been stated, and as the child's age increases, the water and sugar may be gradually lessened. The sugar used for this purpose should be pure refined white sugar. Select one cow, if possible a young one, one that calved as near as possible about the time of the birth of the child. The cow should be perfectly healthy, properly fed, and milked regularly. The selection of cow's milk is of the greatest importance.

If it is decided to "bring up" the child on cow's milk select a suitable nursing bottle, with a nipple which will require the child to make a little exertion to secure the milk. Let the bottle be simple, and easy to keep clean. Never use it to refill without thoroughly cleaning. Sour, musty, decaying milk is not a success as a healthy nutriment for a baby. A filthy nursing bottle is exceedingly favorable to the development of disease germs, and a potent child destroyer. These may appear to be small matters but they are potent in results. The newer the milk the better—the more natural it will be. The mother's milk must be healthy and the diet must be appropriate for it will have a very great influence upon the child. If she eats any articles of diet that disagree with her it will affect the child. Medicines taken by the mother during nursing will have an influence upon the child.

similar to the effect they have upon the mother.

The child should be taught the habit of seeking the breast at regular intervals. This is easily done if undertaken at the commencement. We are more or less creatures of habit and it is much easier to form a habit than to break one. Babies learn quickly and unlearn with difficulty.

The evils of excessive nursing must be borne in mind, for it exhausts the mother and breaks her down. It may be that she may not have milk enough, then it will be necessary to rely partly upon cows milk. Should the mother's health decline under nursing—her recuperative powers be inadequate to the demands of the child and her own system, she had doubtless better wean the child or resort to feeding it cow's milk. It is a mistake for her to take large quantities of fluids to make more milk, as it impoverishes her and does little to benefit the child. If the fluids she takes are nutritious and improve her health and strength, as well as increase the flow of milk they may be continued, otherwise abandoned. If she has too much milk, she must be very careful and not allow her child nurse too much, and thereby injure it.

I am often called upon to decide if beer or the preparations of malt are beneficial and I am inclined to believe they are, if they agree with the nursing mother. They usually improve the appetite, increase assimilation, and aid nutrition, and in this way aid the system to appropriate nourishment from food to supply the demand. If they fail to do this they had better be left off.

SLEEP.

In infancy there is a necessity for considerable

sleep, and when the sleep is calm and natural it should be continued without interruption for considerable time. A young child will be apt to sleep between each feeding, and it is a question of importance to decide whether the child should be waked up to nurse. After the foregoing remarks on habit there cannot be much doubt on the subject, and I would advise that it be done, so that there may be as great a regularity about sleeping and eating as possible, and if this plan is carried out the trouble will be materially reduced. Usually for the first month or two the child will pass two-thirds to three-fourths of the twenty-four hours in sleep. From the second to the sixth month, it will naturally sleep twelve hours at night, waking three or four times to nurse and taking two or three naps during the day.

It should not be expected to sleep too much, for as it becomes old enough to notice objects it will amuse itself with playthings and not sleep so much. Until a child is two years old it will require a nap in the forenoon and one in the afternoon. As it grows older it will sleep less. By a wise provision of nature the amount of sleep in health will usually regulate itself, though the mother may take advantage of it and divide the sleep during the day into regular intervals, for her own convenience and the welfare of the child.

Do not bury it beneath a heavy mass of bedclothes, nor cover it so lightly that it will be chilled. Maintain as near as possible an even temperature. The room should be moderately darkened while sleeping. There should be plenty of pure air, but care is to be taken that it is not left to sleep where a current of air may blow upon it. Do not cover its face with the bed clothes. Give it plenty of room. A crib is better

than to have it sleep in the bed with the mother. Its bedding should be freely and frequently aired, and kept free from all unhealthy odors.

FEEDING.

As a rule it will be best that the child be confined exclusively to its mother's, nurse's, or cow's milk until it is six months old. The organs of digestion in children are very easily deranged and many kinds of food are disproportioned to their digestive powers. Diarrhea will often manifest itself as a result of poor or unhealthy milk, and will also occur when food does not agree, and will cause more or less colic.

When a child is six months old it may have a mouthful now and then of the mother's food, or arrow root, corn starch, powdered rice in milk do well; powdered crackers do well, and from these simple articles a variety of nutritive and easily digested dishes can be prepared. Begin at first with a very small quantity, and gradually increase. Variety is as necessary for children as for grown people. They become disgusted and tired of one kind of diet, and their constitutions require variety. This is an important point, and really is the secret of good nutrition in children. Meats are not much required except under direction of a physician until after weaning. Let them have a crust of bread when they get so they can hold it. They chew or suck it and get nourishment; it teaches them to eat, amuses them and favors teething. When the mother has carried out the fruit diet, and lived on non-osseous materials, the child should have food containing lime, and the various preparations of wheat are beneficial, but must be given in moderation.

There are numerous articles of diet in the market for children, Liebig's, Ridge's, etc., etc., and they have some merit; still from coarse wheat flour a diet can be arranged by the ingenuity of the cook that will be agreeable and beneficial. Care is to be taken to avoid overloading the stomach and not feed it anything too rich for the digestion. Milk must of a necessity enter largely into the composition of its food the first year of its life.

In feeding let the same regularity be observed as is advised in nursing. When the teeth have come, it can begin to chew, and meats may be given—the tenderest meat of a fowl, and they will enjoy eating it very much—broths, soups, gruel, bread and milk. When it has no teeth to masticate meats, eggs may be given.

Until the child is three or four years old and perhaps older, it will need feeding oftener than the regular hours at which its parents eat. It will need extra meals between breakfast and dinner and between dinner and supper. Be careful to prepare their food well, and regulate the hours according to their needs.

It is a very foolish idea to disregard the choice in food, or starve them to certain articles or frugality, in order to make them tough. Privations are not intended for infancy, and upon us depends their future, and we should endeavor to render their constitutions vigorous and energetic by a well selected, well regulated and sufficient diet.

WEANING.

It is often a question of considerable importance when to wean the little one. Nothing is gained by nursing too long when no circumstance demands it.

and on the other hand there may be danger in weaning it too early. As a rule from twelve to fifteen months is the proper age. They should have been for some little time previously gradually inured to the substances from which they must hereafter derive their nourishment, before the change is abruptly forced upon them. Should the mother become pregnant again during nursing it will be best that weaning take place.

The season for weaning is important. During the hot weather, intestinal disorders are most prevalent, and any digestive irregularity it is known will generally give rise to diarrhoea and other diseases of a similar nature, and unless some circumstance renders it imperatively necessary it is not best to wean during hot weather nor just preceding it. The mother should arrange to wean early in the spring so the child may become accustomed to different food, before the hot months, or else she should arrange to defer weaning until those months during which there is the greatest infant mortality have passed. To wean infants in a city in hot weather is fatal in a very large per cent. of cases. Cow's milk in the cities in summer is always a question of serious investigation, and no matter how carefully managed, it is certain if the milk is all right when it leaves the dairy, by the time the infant will get it it will have been influenced to some extent. The country is certainly the place for babies in the summer.

DRESS.

It is a popular, but mistaken idea that children become accustomed to hardships by exposure, and this, together with vanity, which latter is often construed as maternal pride, often subjects them to a system of dress

in which the very parts that should be covered and protected from the cold are exposed. If mothers are particularly desirous to expose to public view any part of the child's body, let them cut out a piece from the clothing immediately over the heart, but keep the neck, arms and legs covered and protected. This pernicious custom of low necked dresses and bare arms, while very pretty, is a fruitful source of catarrhal and pulmonary affections. The surest and safest way to toughen a child is to take every precaution so that it may pass through the first years of its life without any ailment. Every child should be clothed so as to thoroughly protect it from dampness and cold. As a rule fine soft flannel, Canton flannel, and calico are the materials from which the clothing can be made. Fine soft flannel next the skin, except when it would be too often wet is better than cotton material. The dress should be loose and easy, to admit freedom of movement. It is to be sufficient in quantity to protect from atmospheric vicissitudes effectually, and must be regulated by the season and the weather. Every article of dress worn through the day should be changed at night.

BATHING.

The advantages to be derived from regularity of bathing are usually underrated. *The bath serves several purposes of which cleanliness stands first.

It is an absurd idea to bathe children in cold water. The sedative influence of the cold is too great, it favors internal congestions, and often lays the foundation for serious diseases.

Every morning the child should have a bath, the temperature of which may be gradually reduced until after a few weeks, it is not much above the temperature of the

room, but never to coldness. Usually in infancy the temperature may be near one hundred degrees. The water does not want to be too warm, nor should the child remain in it too long, and after a time the morning bath may be reduced to eighty degrees, or even seventy, but it must not be done at once.

In the evening a warm bath may be given for its soothing effect, and a sponge bath at this time is most desirable, though if the child is irritable and restless, immersion of the body for a couple of minutes will be beneficial, and if it is of a feeble disposition a little salt may be added to the evening bath. The child must not remain in long enough to induce perspiration after it has been taken out and wiped dry—if it does the bath will do more harm than good. An hour or two after eating or nursing should elapse ere the bath is given. The room should never be cold, and care is to be taken that the child does not take cold. The skin is to be thoroughly dried after the bath with some soft material. Very little soap is necessary. There is but little oily matter to be removed from a child's skin, and warm water will usually remove other impurities. Whatever soap is used must be unirritating or it may cause skin diseases.

MORAL CONSIDERATIONS.

As a rule children are more intelligent and observing than supposed, and they quickly form habits that are not easily broken. They seldom thrive well when peevish or fretful, while good natured children are most generally healthy. Their dispositions are naturally cheerful and joyous—unless sickly, neglected or mismanaged. The following remarks from Buchanan's obstetrics and diseases of women, are well worthy the

attention of mothers, even though their author may have been guilty of unprofessional conduct as is charged against him.

"The entire system of nursery discipline, too, has a direct tendency to call into action, at an early age, the passions of the child, rather than to still them, or direct them in their appropriate channels. At one time it is dandled and coaxed in order to quiet it; at another, it is scolded and beaten for the same purpose. We either do what it desires or compel it to do what we like. We comply with its whims, or make it submit to ours.

"Thus no medium is observed, and the child is doomed to be always giving orders or receiving them. Accordingly, the first ideas it forms are those of dominion or slavery; before it can speak it commands, before it acts it obeys; and sometimes it is corrected before it is conscious of faults, or even before it is capable of committing any. Thus we implant in its tender mind those passions which are afterwards unjustly attributed to *nature*; and having taken pains to render it depraved, we complain because we find it so."

"But a peevish and fretful disposition in infancy sometimes rises from too close confinement in stagnant and impure atmospheres, impairing the energies of the system, impeding digestion, and subjecting the sentient organs to impressions, if not positively painful, at least uncomfortable. The remedy consists in removing the cause. All attempts to prevent or soothe the fretfulness of an infant by cakes, sweet meats and confectionery, should be prohibited. The child soon acquires a morbid appetite for such things, which is ruinous to its health, and it soon learns to cry and fret in order to obtain them; nor should children when they happen to fall, or experience disappointment of any kind, be soothed by

expressions of extreme pity and sorrow and be allowed, in order to hush its cries, some foolish indulgence. Nothing tends more certainly to encourage a fretful, complaining and exciting disposition, or to induce violent and long continued paroxysms of crying for the most trifling causes."

" Fear of the most intense description, causing immediate injury to health and often producing a lamentable degree of feebleness of character in after life, is not unfrequently excited and cherished in children, by the reprehensible conduct of parents and nurses in attempting to render them quiet, or enforce their obedience to commands given them by threatening with a visit from some object of terror. As we are liable to be ruled often by the influence of incidents and impressions that we have forgotten, or sensations subject to revival by associations, when the causes which first produced them are remembered no longer, how studious, therefore, ought those who have the care of children to be, that no impressions be made on their minds which should bias their affections, mislead their judgments, or render migratory their best resolves to the end of their lives. We ought to be careful, before punishing a child for obstinacy, that its fault really arises from its own wilfulness, and not for childishness or inability to do what you bid it. Inadvertency, forgetfulness, unsteadiness and wandering of thought, are the natural faults of childhood, and, therefore, unless observed to be wilful, are to be mentioned softly, and gained upon by time. Children, if properly trained from their birth, are far more docile than the generality of parents are inclined to believe; and, at a very early age can distinguish between what is reasonable and unjust in our behaviour toward them. They should, therefore, be treated as rational creatures,

and be made sensible by the mildness of our carriage, and by the composure even in our correcting them, that what is done is reasonable in us, and useful and necessary for them; and that it is not out of caprice, passion or fancy, that they are commanded or forbidden anything."

"Anger is the most readily excited passion in childhood. Its immediate efforts are, in the highest degree, prejudicial to health, by determining to the head an undue amount of blood. It is very often the result of having frequently witnessed the exhibition of violent passions in those who surround it. Crying, screaming and various gesticulations of the limbs and body, are the means by which the passions of anger and other violent emotions are generally expressed in infancy."

"Sometimes when a child begins to cry, to pacify it, a stick is offered it to beat the 'naughty stool,' or 'stove,' that made it stumble; with this the child may be quieted, but thence it instinctively acquires the disposition to revenge itself on whatever gives it uneasiness or inconvenience, whether things, or persons: and thus the desire for revenge is so deeply implanted in the mind as scarcely ever after to be entirely eradicated. Parents often truly wish their children to do well, but, by their own example, implant in their offspring the seeds of many a vice.

There is another reprehensible custom, which, though perhaps not exactly a moral consideration, is not wholly inappropriate here, and that is, rocking or jolting the child every time it frets. Children can be taught to go to sleep just as well without rocking as with, and were I to bring up a score of children, none of them should be rocked. True, it often quiets them and induces sleep, but it does it by causing an

abnormal condition of the brain and nervous system. Let a grown person try cradle rocking, or swinging, and see how they will like it. If motion is to be employed, a carriage is far preferable. Frequently when the child is crying from colic, and its little abdomen is distended with wind, or when there may be determination of blood to the head, the head hot, feverish, and if the child could speak it would add, painful, it is taken upon the knee and jolted, jounced and throttled, and the harder it cries the more vigorous the process, until exhausted it falls into an uneasy sleep. I always feel as if I wanted to horsewhip a mother or nurse who treats the suffering child in that way. Were they to try the same process when suffering similar to the child, they would ransack the vocabulary for words expressive of condemnation. Often when attending children suffering with disease of the brain, I have more trouble to protect them from swinging and jolting, than anything else—motions that are not only excruciatingly painful, but absolutely injurious.

MEDICINE.

It is not possible within the scope of a work like this to introduce much pertaining to the remedial management of children, yet a few suggestion may not be out of place. A protest has already been made against indiscriminate dosing.

BOWELS.

Among the first things liklly to demand attention is the evacuation of the child's bowels. Usually the secretion in the mother's breast will be sufficient and we may wait for twenty-four hours without interfering. If at the expiration of this time the bowels

have not moved, give a tablespoonful of a moderately strong tea of elder flowers, sweetened with molasses. Repeat every two or three hours until the object is accomplished. A small dose of castor oil is often given with good results.

JAUNDICE.

New born infants are often afflicted with jaundice which is easily recognized by the color of the skin. The elder flower tea alluded to above is usually sufficient to overcome it if continued for a few days, but must not be given in large enough doses to purge. If the jaundice be depends on a diseased condition of the liver of an inflammatory character, the skin and eyes will be of a dirty yellow, the stools clay-colored, the urine yellow and scanty, the child drowsy, with griping pains. I would advise in addition to the above measures that one-half a grain of Leptandrin be triturated with five grains of sugar of milk, and given at a dose. This may be repeated every four hours until the stool exhibits bilious matter. If the trouble does not yield quickly a physician had better be called.

THE URINE.

Usually the kidneys perform their functions naturally at birth, and if the child does not pass its water within ten or twelve hours, there will be more apt to be some obstruction to the flow, than a lack of secretion. Observe carefully that it has not urinated. If the urine is retained and the bladder full, it may be felt as a round, circumscribed tumor in the lower part of the abdomen. If such be the case a physician is to be called at once, who will introduce a catheter, or bougie, for the child's relief, unless some other expedient he may suggest avails. If there is no urine

secreted, then a few drops of sweet spirits of nitre in water may be given. Before resorting to medicine a correct diagnosis should be made, for if the bladder is full and nitre be given it may increase the trouble.

SORE EYES.

Three or four days after birth, infants are often attacked by a peculiar species of inflammation of the eyes, which should receive immediate attention, for delay here is especially dangerous and may result in destruction of sight, while if promptly and properly treated will generally yield with little trouble. The causes may be matters of an irritating character from the mother getting into them at birth, cold, exposure to bright light, soap suds getting into the eyes when washing it. A physician should be called at once, though a tea of chamomile flowers to bathe the eyes is often beneficial, I have found the following very satisfactory:

Permanganate of Potash, grains 2,
Pure water, ounces 4.

Mix—bathe the eyes often with it, taking care to get some of it into the eyes.

Borax, grains 5,
Rose water, ounces 1.

Mix—is also an excellent mixture and may be freely used. Wash the eyes with pure warm milk and water and remove all crusts and secretions, and to prevent the lids sticking together, apply a little pure olive oil or a dram of pure glycerine may be added to the borax and rose water for the purpose, and will usually be found to work well. The eyes are to be protected against the light. The bowels must be kept gently open until the inflammation subsides.

VOMITING.

This must not always be regarded as an evidence of disease for many healthy children vomit. Indeed it must be regarded as a wise provision of nature for the disposal of an excess of food. When this is the case care should be exercised to diminish the quantity of food taken. Vomiting may however be caused by an unhealthy condition of the milk. It is also the result of irritation of the stomach, and when due to this latter cause the child soon becomes pale, feeble, distressed looking, and loses its appetite. The remedies mostly to be depended upon in these conditions are to be derived from the homœopathic school and are aconite, arsenicum, ipecac, nux vomica and pulsatilla, and a drop of the tincture of either may be put into a glass half full of water, of which a teaspoonful is to be given every three or four hours. Preparations of pepsin are much employed for the purpose, and for an infant of a few months one grain of pepsin and one-fourth grain of subnitrate of bismuth may be given every three or four hours with advantage thus,

Pepsin, 4 grains.

Subnitrate of Bismuth, 1 grain.

Make 4 doses. One every three hours.

DIARRHŒA.

Derangement of digestion, over-feeding, disease of the mother, impure milk, and a variety of circumstances render infants liable to a looseness of the bowels. The cause should be carefully sought and remedied, for nothing is more damaging to infants than the disorders of the stomach and bowels. The prescription just given is excellent and will generally correct the stomach and through it the bowels. The addi-

tion of a tablespoonful of limewater to a pint of milk will in many instances arrest the trouble. All indigestible articles of food must be carefully prohibited. Often oily matters are the cause, and by skimming the milk it may be taken without further trouble. Opiates are too often resorted to, but they merely check the trouble for the time being only to break out again when the remedy is suspended. I have found the homœopathic remedies—chamomilla, camphor, ipecac, podophyllum, nux—usually adequate for the relief of such cases when associated with regulation of diet. One or two drops of the tincture may be added to one-half glass of water and a teaspoonful given every two or three hours.

COLIC.

This is one of the approbia of infancy, and may depend upon flatulence, or upon impaired digestion, acidity, etc. When upon acidity a little soda is the most ready remedy, and may be added to the milk. The stools in this case will generally be green, and the matter vomited sour, the child worisome. When from impaired digestion careful regulation of the diet and nux vomica as under the head of vomiting. When due to flatulence a little camphor sling, tea of fennel seed, sweet flag, cellery, chamomile, etc. I have, however, found colocynth one of the grand remedies for infantile colic. It may be given as prepared and found in the homœopathic medicine cases or this:

Tincture of colocynth, 2 drops.
Water, 2 ounces.

Dose a teaspoonfull every hour. One dose will usually suffice, and by repeating it once in four or five hours the tendency to colic is often broken up.

TEETHING.

The formation of bone as may be inferred by reading the preceding chapters, requires the food to contain more or less of lime. As our dietetic measures deprive the infant of this element during its foetal existence the question arises, may not this element be so deficient as to retard the natural development of bone, teeth, etc., after birth? Such a condition is not likely because the food of the mother, milk, etc., contain this substance in sufficient quantity for the purposes of the system, and it is often administered in the form of lime water in milk. When the child manifests the symptoms of teething, and still the teeth delay, I have often given some of the preparations of lime with speedy results. The homeopathic school recommend the carbonate, or as they term it, calcarea carb. It is an effective preparation and will give satisfaction. The process of teething is very often accompanied by derangement of the bowels, and we are to be careful how we abruptly check a diarrhoea at the time lest we cause an irritation of the brain and nervous system of far more serious tendencies than the diarrhoea. Usually the gums will be swollen and hot and painful. Frequent bathing the mouth of the child, cooling drinks, etc., will be beneficial, and at the same time if there is diarrhoea lime water should be added to the milk. If the diarrhoea becomes too profuse employ the remedies as directed under diarrhoea. If there are symptoms of disturbance of the brain control with gelsemium. This will be better than opiates, thus,

Fluid extract of gelsenium, 2 drops,
Water, 2 ounces.

Dose—a teaspoonful every one or two hours.

If there is fever, add aconite to it thus,

Fluid extract gelseminum, 2 drops,
Tincture aconite, 2 drops,
Water; 2 ounces.

Dose—one teaspoonful every one or two hours.

The child should have something to bite on at the same time to aid in bringing the teeth through. I have found such a course satisfactory in nearly all cases.

CHAPTER XI.

STERILITY.

In obedience to a Divine mandate, it is natural for woman to yearn for motherhood, for it is the ideal state of every woman who has not already arrived there. Although it is not uncommon to meet young married women who wish to defer the assumption of maternal responsibilities for a time, there are few women indeed who will voluntarily pursue life's journey without the companionship of one or more of those little blessings, to enliven her sympathies and increase her enjoyment in the noonday of life and comfort her declining years.

Marriage is the consummation of love; yet without offspring its object is but half attained. The coming of children strengthens the ties already existing between man and wife, and renders happy and harmonious lives that would otherwise be passed in estrangement and discord.

The yearning of the wife's heart for children is a

natural instinct that is largely shared by the husband. Although they may conceal their desires from one another, and even publicly assert that they entertain an intense hatred of children, in the privacy of the professional consultation confessions are made which prove that Nature is true to herself. "With many females, the grave is looked forward to with more cheerfulness than a childless longevity, and not a few husbands would rather die in the prime of manhood and leave an heir, than to live to gray old age and be considered incapable of reproduction."

So great is the regard of offspring by both husband and wife, that I do not consider it as a betrayal of professional confidence, when I assert that consultations are by no means infrequent, and that in special practice, the question is often asked by both male and female. "am I capable of becoming a parent?" and when disappointed in the realization of their desires, though perhaps charging the fault upon the other, secretly, and without the knowledge of the other, seek professional advice and remedy. In other cases both parties seek advice together, hoping by so doing that the true cause of the barrenness may be ascertained, and the proper remedy obtained.

There are very few subjects that give men or women more anxiety than this, for to go through life with the self consciousness of procreative inability, is indeed a source of the most intense unhappiness. Quacks have taken advantage of this and made the subject the basis of numerous "Marriage Guides," in which the authors have sought to impress the unmarried with a belief in their own incompetency in order to wring from them large sums of money for pretended restoration.

According to the observations made by English in-

vestigators nearly one married woman in eight is barren. Barrenness however cannot be considered as absolute, even without interference, for it is known that women who have borne children may become sterile, while on the other hand women who have been sterile for years subsequently become fertile. It has not, however, transpired in the course of these investigations how far the sterility may be the fault of the husband. Nor is it likely that such an inquiry can ever receive more than an approximate answer, for the very reason that people will never consent to have their private matters become public property to the extent necessary to form a close estimate.

The average time elapsing between marriage and the first child is about seventeen months. The first three years may be permitted to lapse before the woman can practically consider herself sterile, though if she has not made use of any preventives during that length of time, and conception has not occurred, the chances are as thirteen to one against her, for she will be likely to remain unfruitful, except she receive assistance from art.

In considering this subject, it is to be remembered, it does not always follow because a marriage is fruitless that the wife is to blame. Nor does it follow because a woman has not born living children that she is always sterile. Nor is it certain that if she is barren the first few years of married life that she will never have children. Woman sometimes becomes fecund after years of sterility. The mother of Louis XIV was sterile for twenty-two years before his birth; the wife of Henry II, became the mother of ten children after a period of ten years of barrenness. Dr Tilt of England mentions a case of a healthy woman who

had married a healthy man at eighteen, but did not bear a child until she was forty-eight. Numerous instances are on record where a marriage has been unproductive, divorce followed with subsequent marriage of the man and wife to another woman and man, respectively, and the subsequent unions were blessed with offspring.

The causes of sterility are various, and in a very large per cent of cases, can be remedied. A careful investigation of each individual case will usually reveal the cause of sterility and point out the indications of cure.

Among the causes most frequently met with are the following: Chronic inflammation of the neck or body of the womb; stricture of the neck of the womb; flexure or elongation of the neck of the womb; tumor, growth, polypii or other obstructions of the neck of the womb; displacements; uterine tumours; ovarian diseases; profuse and acrid vaginal secretions; leucorrhœa; imperforate hymen; sexual excesses; uterine and ovarian debility; membranous dysmenorrhœa; menstrual derangements; sexual frigidity; nursing; late marriages; disease of husband causing imperfect development of spermatorrhœa; temperamental incompatibility; imperfect development of the womb and ovaries; displacement of the ovaries; stricture of the fallopian tubes; adhesion of the fimbriated extremity of the fallopian tubes; etc., etc.

From this list of causes it will be readily inferred that with the exception of the last three or four, all are amenable to treatment when properly understood, because they are dependant upon conditions which the best authorities of the present unite in declaring curable.

Formerly, the causes of sterility were shrouded in mystery, and the treatment speculative and empirical, but light has been let in upon the subject by modern investigators, and barrenness is now known to be occasioned by certain conditions capable of removal. Much of what is known of the diagnosis and treatment is due to the labors of Drs. Sims, Thomas, Emmet, and a few others, who have stripped the subject of its mystery and made the treatment more than a mere matter of conjecture and guess work.

It will be seen that a very large per cent of these causes act in a purely mechanical manner, by preventing the entrance of the spermatozoa into the womb or beyond it where it may by uniting with the germ cell occasion conception. Numerous theories have been advanced as to the manner in which conception takes place. It is now understood that the sperm cell of the male and the germ of the female must come in contact before it can occur, and that this union must occur beyond the mouth of the uterus, and under certain conditions. How these cells influence each other is not at present definitely known, but upon their union the germ acquires a disposition to unite itself to some tissue from which it may receive nourishment and support. The tissue which is most favorable for this purpose is the lining of the cavity of the womb, though it sometimes occurs in the fallopian tubes, or at the ovary. The cavity of the uterus appears to be the most favorably designed for the reception, protection and development of the fecundated germ, and the question seems settled that the sperm cell—the spermatozoon *must* penetrate the reproductive passages of the female as far as this cavity, or fecundation cannot take place. So far as I have been able to ascertain,

no instances are recorded where conception has taken place between the cavity of the uterus and the external generative organs of the woman.

So far as the penetration of spermatozoa to the cavity is concerned, it is entirely mechanical and may occur without the female experiencing any of the sensations due to the generative act whatever, although recent developments show beyond a doubt, such experience on her part favors such penetration.

Instances have been known in which the spermatozoa have penetrated the uterine cavity and passed through the fallopian tubes to the ovary, but it is not satisfactorily determined that it must always do so in order that conception occur. After the union of these two infinitesimal cells has taken place certain other favorable conditions are necessary to their development, and it is upon these conditions that the success of the impregnation depends. If the sperm cells are unhealthy or imperfectly developed, although the maternal parts are prepared for their reception their death instead of their development will occur. If the interior of the womb is in an unhealthy condition the fecundated germ may be unable to effect its adhesion and consequently be thrown off. If the ovaries are diseased the germ cells may not be able to maintain life and perform their part. Thus failure may be due to some defect in the sperm cell, in the germ cell, or in the condition of the uterus. In addition the disciples of the electro-magnetic, and the temperamental doctrine, will have us believe that the failure may be due to defective magnetic conditions, temperamental incompatibilities, etc., which perhaps, even themselves cannot clearly explain.

Among the causes of sterility, doubtless the most important are those which oppose the entrance of the spermatozoa into the uterine cavity where conception can take place; these are anything that obstructs the uterine canal, and may exist before a child has been born, or may be acquired afterwards thus, imperforate hymen; displacements; tumorous, polypi, granulations, or other growths within the neck of the womb; angular curvature of the uterine neck; stricture of the same; and chronic inflammation, to which might be added technically, occlusion of the mouth of the womb.

IMPERFORATE HYMEN.

This as any one who will consult a work on anatomy will readily see necessarily prevents the entrance of the spermatozoa; indeed it does not permit them to even reach the mouth of the womb at all. At one time the hymen was considered as the test of virginity, but thanks to the enlightenment of the present it is no longer so. There are many ways in which this membrane may be ruptured without in the least compromising the virginity of a female. It may be ruptured by the use of a female syringe which every female who respects cleanliness will use, occasionally, at least. It may be so fragile as to be ruptured by the menstrual flow, and in other ways; while on the hand it may be so powerfully developed, that all attempts at copulation will be futile. There may be a small orifice through which the menses may escape, and through which it is possible the spermatozoa may enter but not very probable. When this is the case nothing short of a surgical operation will suffice for its removal; on the other hand the woman is blamed

if this exceedingly uncertain test of chastity does not exist, and on the other side she will be blamed for the sterility its excessive development occasions. In the first place none but the ignorant, prejudiced, and exacting will be disappointed if it does not exist. In the second, a professional consultation will allay any unhappiness and anxiety. Let our readers bear in mind that in medical jurisprudence the presence of this membrane is not an absolute proof of chastity nor does its absence prove immorality.

UTERINE DISPLACEMENTS

may occasion sterility. The manner in which they operate is either to turn the mouth of the uterus in such a direction that the spermatozoa cannot reach it, which might be the case in anteversion, a displacement in which the body of the uterus is tipped forward and downward, and the neck and mouth carried upwards and backward. The central attachment acting as a pivot upon which the uterus very nearly turns bottom upwards by tipping forward. This condition is usually associated with more or less trouble with the bladder, and is exceedingly difficult to cure, mechanical means being usually essential to success. In retroversion the uterus tips backward instead of forward, the body of the organ falling backward into the hollow of the sacrum, while its mouth is carried forward and upward behind the bladder, turning the mouth persistently away from the spermatozoa. By the pressure of the uterus in this condition upon the lower bowel constipation and backache are occasioned. This form of displacement is more frequently met than anteversion. It may be cured by mechanical measures to overcome the mal-position

and remedial agents to so tone its supports that the natural position may be maintained. Very often this displacement is associated with an enlargement and increase in weight of the organ which must be overcome before a permanent cure can be expected. These mal-positions very often result in sterility. Another form of displacement known as prolapsus or falling of the womb, is often a cause of barrenness. In such cases the mouth of the uterus often rests upon the floor of the pelvis and is buried in the soft tissues covering the perineum or vaginal walls, which form as it were by the pressure a complete covering for the mouth of the womb preventing the entrance of anything. To overcome this trouble has taxed the ingenuity of the profession for years. In such cases there is a great variety of symptoms, sympathetic disturbance, etc. The indications of cure are to reduce the increased weight of the organ, replace it, and by increasing the power of its supports or otherwise maintain the proper position. This is often difficult to do, and we often hear a physician saying "if you could only have a child it would cure you," the truth of it is, if they could only cure the patient she would be very apt to have a child. We cannot in the space allowed this subject consider the methods of cure, nor would many be likely to succeed without professional assistance. Artificial supporters are necessary in many cases, while in others they make the trouble worse, and are so painful that no woman can wear them.

TUMORS, GROWTHS, ETC.,

when occurring in the uterine neck form a mechanical obstruction to the entrance of spermatozoa, and as con-

ception cannot occur in the vagina, they become efficient causes of sterility. By blocking up the canal of the uterus they interfere with the escape of the menstrual flow and cause severe pain at the menstrual period and by modifying this function are often the cause of profuse hemorrhage. A careful examination is necessary in order to correctly diagnose the nature of the trouble. On the introduction of a speculum the trouble may be at once apparent, or it may require the dilatation of the uterine mouth and neck before the source of trouble becomes visible. Very often the morbid growth will be so small as to escape notice, yet it is a very efficient source of trouble. The growths most frequently met with are granulations, or polypi, though tumors may be present. The measures to be employed for their removal necessarily vary with the nature of the growth, size, location, etc., etc. Granulations and small polypi, will usually disappear when pressure is applied continuously for a time and for this purpose sponge tents are used, medicated or otherwise, as may be. Caustics are frequently employed, but when either measure is employed it must be by the direction of a skillful physician. Large polypi may be removed by forceps, snare, ligature, or scissors—hemorrhage may be troublesome—but usually in the hands of one who understands his business there will be little trouble or pain in their removal. The removal of tumors may be effected by knife, ligature, caustic, injection or electricity. No one but a skillful surgeon has any business to touch them. When either of these troubles have caused sterility their removal will be likely to be followed by conception. It may be proper to place in this division another form of abnormal development that is some-

times met, as a cause of barrenness ; it is when the posterior lip of the uterine mouth is unnaturally long and folds over the entrance of the womb like a valve, forming an effectual barrier against the entrance of anything into the womb, but is no impediment to the escape of the menstrual flow. Such a condition might pass entirely unnoticed because it would not be attended by any other troubles that would be likely to lead to its recognition, and unless the female came under examination to ascertain the cause of her sterility, it would probably never be known, and even then unless the examiner was on his guard it might easily escape detection. This cause could be easily remedied by a surgical operation.

CURVATURE

of the neck of the womb, is a fruitful cause of sterility, and is a frequent source of painful menstruation. The body of the womb may be bent upon its neck in such a manner as to obstruct the canal sufficiently to prevent the entrance of spermatozoa, or exit of menstrual matters, in the same way that the finger of a glove may be bent as to prevent the passage of even water. The curvature may be so great that the axes of the neck and body of the womb will intersect at nearly right angles. Take a hollow tube and bend it upon itself to a right angle, or even an obtuse angle, and you have a good illustration. When the curvature is forward, it is called "ante-flexion," if backward, "retroflexion," if sidewise, "lateral-curvature." These deviations from normal position, are often more easily recognized than cured. Several forms of treatment are in vogue, one of which is to cut or divide one side of the neck, before or behind according to the

flexion, in order to establish a straight and free passage. When properly performed, it is generally successful; is not very painful, though there may be some hemorrhage. The subsequent treatment must be thorough or the divided portions may unite and leave it worse than before. Another plan is to dilate the neck of the womb and introduce an instrument that will hold it straight, until the curvature is effectually overcome. Uterine supporters are also employed, but the surgical treatment is by far the most successful, though the dislike many entertain to the knife will often lead to a trial of the other measures. Many cases are recorded in which the successful treatment of curvature by one or other of these methods has been followed by the realization of the highest hopes—a child!

STRICTURE

causes sterility in a manner very similar to curvature, the uterine canal being narrowed by constriction so as to prevent the easy passage of menses from within, or spermatozoa from without. An examination by the touch, or by speculum, will often reveal nothing, but when an attempt is made to introduce a uterine sound, the trouble becomes apparent. This trouble is therefore very often overlooked, and the sterility attributed to other causes. There is very little excuse however, for overlooking this condition, when a thorough investigation is being made. The treatment of this difficulty consists in permanently enlarging the canal, which may be done by the use of tents or bougies or by a single or double incision. The use of tents rarely effects permanent dilation, for the uterus has got a tendency to turn to its previous condition after their use has been discontinued. Bougies are more success-

ful if properly used, and may be retained in position much longer than tents, but the incision, performed in much the same manner as for curvature, and properly attended until the incised surface has healed up is almost always successful, and occasions little pain though the woman must remain in bed several days. There are few cases but remain permanent if the operation has been made with the requisite amount of skill. The performance of this operation, and the frequency with which it has been followed by conception, as well as relief from the most intense suffering at the menstrual period, reflects very great credit upon the name Dr. J. Marion Sims.

ELONGATION

of the neck of the womb is also a source of barrenness, and its successful amputation has been effected. When the neck is unusually long, there is generally a corresponding narrowness, and the treatment is made for the purpose of enlarging the canal to facilitate the passage of the spermatozoa. It makes little difference in the result, which of the three operations, as for stricture, are made, if properly performed, but of course skill will be necessary and no one must attempt it without a clear understanding, and the requisite facilities.

OCCLUSION

by which a complete closure of the neck of the womb is meant, may be due to congenital malformation, or to ulceration, which in healing has resulted in uniting the edges in such a manner as to completely obliterate the canal. The improper use of caustics may also produce the same result, and there can nothing enter the uterus nor escape from its cavity. Such a condi-

tion will be far more likely to demand interference on account of the trouble arising from the retention of the menstrual discharge, than for the relief of sterility. The establishment of an artificial opening by surgical means is necessary and gives speedy relief; such cases are rare.

CHRONIC INFLAMMATION.

This may be confined to the neck of the womb, to the body, or to both, and may involve only the mucus membrane, lining or extend to deeper structures. It is a frequent affliction of civilized women, and on account of its frequency, becomes one of the fruitful causes of barrenness. An endless variety of symptoms accompany this ailment, which are not only referred to the reproductive organs, but through sympathy, may extend to every part of the body. This ailment is not an absolute preventive of conception, but it is not very probable that the woman that is afflicted with it will bear children. In this trouble the neck of the womb may be much larger than natural, and the membrane very much relaxed, but there will be formed in the neck a plug of thick tenacious mucus, so completely filling the canal that it apposes a mechanical barrier to the entrance of the spermatozoa. When this is not the case, it will be so acrid that it destroys the vitality of the spermatozoa, and the sterility is as certain as if they did not reach the locality at all. I have known many physicians to fall into error in the matter, because they were mislead about the possibility of the mechanical impediment, when the canal was so much larger than normal. A cure of the ailment is essential to the fruitfulness of the female, and can be effected by a proper and persistent course of treat-

ment, but to give a course of treatment so that it would be available, would require more space than is at our present disposal, and the patient is referred to the works on the subject. Constitutional treatment alone will not always be successful, and local measures are often demanded. The internal employment of the squaw vine and black cohosh already mentioned may succeed, and are worth a trial. Their employment may be aided by injections, more particularly for cleanliness, and the use of pieces of cotton batting saturated with glycerine and placed against the neck of the womb. The action of the glycerine is to set up a drainage of the watery elements of blood contained in the minute blood vessels of the uterine neck, and thus relieve the turgescence and stagnation. They are to be repeated daily or at least every other day for considerable time, but omitted at menstruation. Medicating the glycerine with one-eighth part of tincture of iodine, golden seal, calendula, etc., sometimes increases the efficacy.

MALFORMATIONS.

It is scarcely necessary to allude to anatomical defects other than those already considered, for the public are aware of their influence on fecundity. Some may, however, be remedied by surgical means, and we would urge all women whose happiness depends upon their anatomical perfection not to be discouraged until they have consulted some good surgeon. It would be the part of wisdom, however, when a malformation exists not to enter into matrimony until a surgeon has been consulted.

The foregoing causes of sterility are mechanical in their operation, and the removal of the cause by med-

ical or surgical means will usually be followed by relief of the maternal disability. Should the sterility continue more than two years after the removal of any of the causes already considered some other cause will have to be sought for, among which, the most frequent are the following: Acrid vaginal discharges; membranous dysmenorrha; menstrual derangements; uterine and ovarian debility; sexual excesses; sexual apathy; ovarian disease; late marriages; imperfect development of ovaries; displacement of ovaries; stricture of fallopian tubes; temperamental incompatibility; disease of the husband; nursing, etc., etc.

ACRID VAGINAL DISCHARGES

prevent conception by destroying the spermatozoa before they reach the germ cell. Usually this trouble will be considered as leucorrhora and properly enough so, yet experts assure us that some forms of leucorrhora or "whites" do not cause barrenness, while others do. Facts of the kind are within the knowledge of nearly every observing person. The leucorrhoral secretion is not always the same but admits of a great variety of modifications, and some forms are so very acrid that they are as destructive to cell life as a solution prepared in the laboratory of a chemist could be. In such cases, particularly if long continued, there will usually be soreness of the parts caused by the corrosive character of this discharge. While a cure is always desirable it is not always so easily effected. A lotion of permanganate of potash, ten grains in a pint of water used freely is very valuable, still there may be constitutional troubles on which the discharge depends that will need attention as well as the local trouble. The sepia of the homœopathic

school I have found exceedingly valuable in such cases, as an internal remedy. Locally, a great variety of remedies have been employed, but as it is only as a cause of sterility we are considering it, we may say that if the spermatozoa can escape the deadly influence of this secretion and enter the uterus conception may be effected. The use of injections before the sexual act, to remove as much as possible of this secretion will increase the probability of success, and if after the use of an injection of warm water, which is made for the purpose of cleanliness, an injection of milk is used the probabilities of success will be enhanced, the object being to protect the male element in its passage to the womb, by removing the vaginal secretions or by rendering them harmless.

MEMBRANEOUS DYSMENORRHORA

is that form of painful menstruation in which the flow is expelled with shreds of tough membrane, or perhaps with complete casts of the interior of the uterus. Although it does not always cause barrenness, it is likely to do so. Its pathology is not well understood. It causes sterility by preventing the united sperm and germ cells from securing an attachment to the walls of the uterus so that development can occur, or carries them away with it when it is expelled. It is difficult to cure. When conception does occur it must take place soon after menstruation. It may exist in the single. When the disease is removed, among the married, pregnancy results. It has been thought that pregnancy would cure it, but instances have come to knowledge where the woman had borne more than one child and still did not get relief from this trouble.

MENSTRUAL DERANGEMENTS

usually cause sterility, particularly when the flow is profuse, by washing away the impregnated ovum. When there is menstrual derangement, a functional disease of the womb or a disease of the ovary is apt to exist, which may prevent the perfect development of the germ cells and thus cause the union of the male and female elements to be futile. The use of the squaw vine will be found of great value in these cases. Rectify the derangement and pregnancy may then occur. There is a plant known as *Senecio Aurens*, or life root, which may be used with the squaw vine in infusion or syrup. Some times the derangement results from a very low grade of vitality on the part of the woman, and when such is the case the preparations of iron are of value. If from congestion with dragging down, aching, etc., the use of small doses of belladonna may so far overcome it as to favor conception. Fifteen drops of the Homoeopathic tincture in four ounces of water and a teaspoonful taken every four or five hours, often succeeds.

UTERINE AND OVARIAN DEBILITY,

cause sterility by imperfectly developing the germ cells or by imperfectly nourishing them after they are fecundated. Where there is no constitutional debility, we may attribute the sterility to purely local debility or inertia. In case there is constitutional debility, a course of tonics are proper, iron, squaw vine, life root, quinine, nux vomica, etc., in proper, doses will often be followed by the desired results. In case of a purely local inertia or debility the use of electricity, passing the current through the body from the lower part of the back to the point over the pubes

may succeed. The use of an electrical current passed into the uterus by one pole of the battery being introduced into it—the other over the back is sometimes successful, and so is the application of a strong child to her breasts. There is a sympathy between the breasts, and womb and ovaries, and by the reflex influence the natural function is so acted upon that conception at the time may be effected.

SEXUAL EXCESSES

exhaust the vitality of both parties to such an extent that the germ and sperm cells may not be sufficiently viable to perform their part in reproduction. By a wise provision of nature, such devitalized elements are frequently unproductive, and it is well that it is so. The remedy lies in modifying the indulgences to a frequency consistent with vitality, correcting the debility with a judicious course of tonic medicines, and if necessary such a course of local treatment as has been advised under the preceeding section, electricity, cold bathing, sea bathing, etc.

SEXUAL APATHY

while not an absolute cause of sterility, may properly be considered as one of them. Many women bear children who do not experience the least sexual desire; yet others are barren on this account. When such is the case, an inquiry into the causes of the sexual apathy is necessary and the case treated according to such indications as may be rendered apparent by the investigation. The fact that sterility is not always caused by the absence of sexual senses, leads us to the presumption that it is only in certain forms of this condition that sterility results, consequently the course of treatment selected will have to be dependant upon the cause. The use of tonics,

electricity, injections of stimulating substances, as ammonia, (weak,) tincture of myrrh, etc., are sometimes valuable, as is the internal administration of musk, phosphorus, iron, quinine, etc., in proper doses, which may be determined from any work on *Materia Medica*.

OVARIAN DISEASES

prevent conception by preventing the development of the germ cells entirely, or by causing them to be so imperfectly developed that they cannot perform their part. The consideration of diseases of this kind is not within the scope of this work, while displacement of the ovaries, their imperfect developement, together with stricture of the fallopian tubes, are of such a nature that a consideration of them would be of no value to the sterile woman, for nothing she can do will be likely to afford her relief, and we must refer them to those who make such ailments a specialty.

LATE MARRIAGES.

The period of the greatest fecundity occurs on an average between the ages of twenty and twenty-four, and the farther the latter period has passed without becoming a mother, the greater are the chances that she never will be thus favored. This is more particularly the case where no organic disease of the womb or ovaries exist as the prime cause. There are very many notable exceptions to this rule, and if some other cause may not be determined, we would not advise the woman to become discouraged, for possibly, nature may bring about some mysterious (?) change that will result in her maternity. Anne of Austria and Queen of France—' history informs us—gave birth to Louis XIV, after a sterility of twenty-two years, and after ten years of barrenness, the wife of Henry II, bore ten children. Horseback excrcise has

sometimes been beneficial in these cases, particularly when carried to excess. Just before or a few days after menstrual period, conception is most apt to occur, particularly if total abstinence is practiced in the interval.

NURSING

is a *fruitful cause of unfruitfulness*, though not absolutely certain for instances are constantly coming under observation in which conception occurs during nursing. It is supposed the reason is because the vitality of the woman is expended in supporting the child at the breast by the secretion of the milk, during which time the ovarian and uterine function is suspended. After weaning, conception is very likely to occur, particularly if the mother has not seriously deteriorated in health.

THE HUSBAND.

Very often the woman is blamed for unfruitfulness, when she is entirely innocent, while the husband is the real culprit. Knowing as I do the extensive prevalence of self-abuse, and its ruinous consequences on not only the reproductive organs but the general system, I can easily understand how the spermatozoa may be so defective that they cannot impregnate the germ cells of the woman, no matter how perfectly developed and matured these may be. The seminal fluid of the male does not always contain perfect spermatozoa, and if no good cause can be assigned for the sterility on the part of the wife, it is well to enquire into the condition of the husband, before the wife is subjected to censure.

The husband may have had some disease at some time of his life that has impaired the functions of the testicles, or he may have done so by leading a lecherous life, and I am satisfied many a wife has been unjustly blamed in the matter.

TEMPERAMENTAL INCOMPATIBILITY

is a cause often mentioned and while it is possible, it is too little understood to be very often considered in the question of reproduction, farther than to the inheritance of peculiar constitutions. Electro-positive, and electro-negative conditions are essential to the harmony and procreative success of a matrimony. It may appear a little far-fetched, when we consider that the polarity of organs or bodies, may be more or less modified or changed by circumstances, excitement, etc., yet an inquiry into the causes of sterility, could not very well evade its consideration, and if both parents are similar in temperamental and magnetic qualities they may be unfruitful, while the same parties united to others would be fertile. No better illustration of this subject is needed than the well known one of the first Napoleon and Josephine. She had had children in her first marriage; he became a father in his second; true there may arise a question of Josephine's fertility with another husband at the time, a question that will no doubt always remain open. It is nevertheless a recognizable fact that certain parties are illly adapted to each other, socially, at least, and though the question of temperaments has furnished a fine field for quackery, but little as yet is definitely known of it as a cause of sterility. There are many questions that rise before me even as I write, but their consideration might lead in some cases to domestic infelicity, without doing much to unravel the mystery, and it is best that its consideration be deferred to a future time or submitted to those who delight in such metaphysical (?) enquiries.

The question of temperaments, however, is one that should receive attention from marriageable people,

even aside of its influence on fertility and the fruitfulness of the union. It is easy enough to follow the subject in the divisions laid down by those who have made the study a specialty, and to say who are best adapted to each other, but to carry the question to a consideration of sterility is extremely difficult, because there may be circumstances connected with the sexual life of a husband and wife, before or after marriage that no inquiry would reveal, and I must confess that the subject in the present state of society seems a very *unproductive one*.

OTHER CAUSES.

We have already considered the most frequent causes of barrenness and pointed out the indications for their removal, many of which we are sorry to acknowledge cannot be carried out wholly by the woman herself. In the treatment it may sometimes be found that after the removal of some cause the sterility will continue. When this is the case some other cause must be sought for, for it so happens that occasionally a combination of causes may exist. The researches of Dr. Sims have shown that for the most part the causes of sterility are mechanical, and that the removal of the mechanical cause is followed by pregnancy in a large proportion of cases. It has been my endeavor to show the barren woman the operation of those causes, and to point out other causes which may offer an opposition to her happiness. There are, however, still other causes which do not admit of any general classification, but they are not very frequent, and it is presumed they operate remotely rather than by being causes within themselves. Of these we may mention season, climate, social position, sexual relations, etc.

It is claimed that spring is the most favorable season for fecundity. Climate, no doubt has much to do with fecundity and barrenness, but it is no doubt due to the influence it exerts upon the general health, though it is said that the southern climate is more favorable than the northern. Perhaps this may be accounted for by the difference of the sexual dispositions of those who live in the different climates. Sterile women traveling with their husbands, sometimes find that an ocean voyage, or a trip to some other climate so modifies or improves their general health that it ultimately fits them for becoming mothers. Social position, no doubt has something to do with fecundity, and without making any inquiry into the sexual relations of the rich and poor, I will state that women who live in luxury and fashion are not so prolific as their poorer sisters. Those who are best circumstanced to care for large families, rarely have as many children as those who find it difficult to provide for them. It is said that in Belgium, the higher the price of bread, the greater the number of children, and the greater the infant mortality. In another chapter, allusion has been made to the greater prevalence of uterine disease among wealthy ladies in proportion to their numbers, which may partially account for the difference in the size of families. On the other hand, many weak and feeble women have a numerous progeny.

Sexual relations no doubt exert a greater influence upon fecundity, fertility and sterility, than is generally supposed, and this is not only in relation to the relative conditions of health, but also to the other relations married people sustain to each other. The subject, however is one which, while the reader might be specially desirous of understanding, my regard for

propriety forbids its consideration in this place. There is an inadaptability often existing between the parties to a marriage contract, that renders their lives unhappy, and prevents them from having children. The sterile will do well to consider the subject and ask themselves the question, what is wrong? When people live unhappy lives, who is to blame? are both? or is only one? Such queries may lead them to be more forgiving to each other and thus relieve the mental causes of sterility. This may seem far-fetched, and will, perhaps be criticised by those who can only see causes of sterility in the tangible conditions already considered, yet if the mind can influence antenatal conditions so as to cause "birth marks," may not lack of mental, moral, social, sexual and domestic harmony be equally as unfavorable to the occurrence of conception, as to the perfect developement of the child that has been conceived.

In closing the author hopes that a consideration of this chapter will be the means of directing unhappy and sterile wives to the realization of their maternal desires, as well as by previous chapters, to relieve the fertile ones of the difficulties and dangers, the pains and the perils of childbirth.

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